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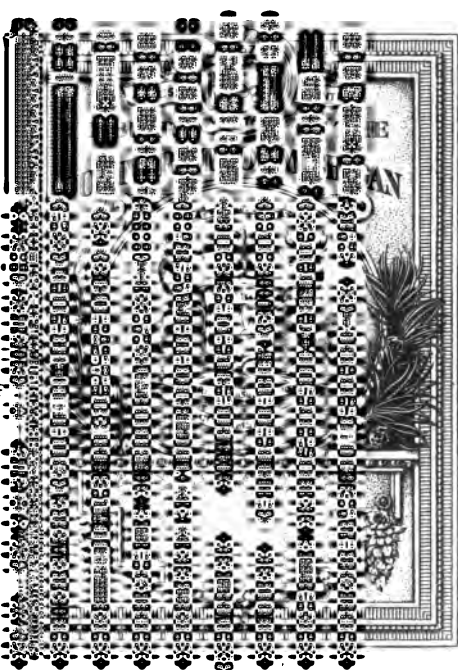
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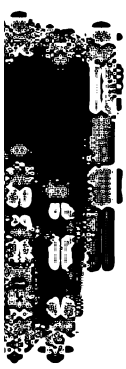
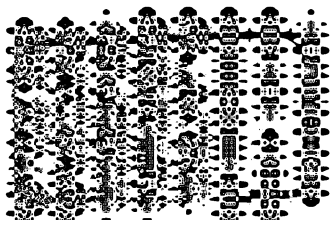
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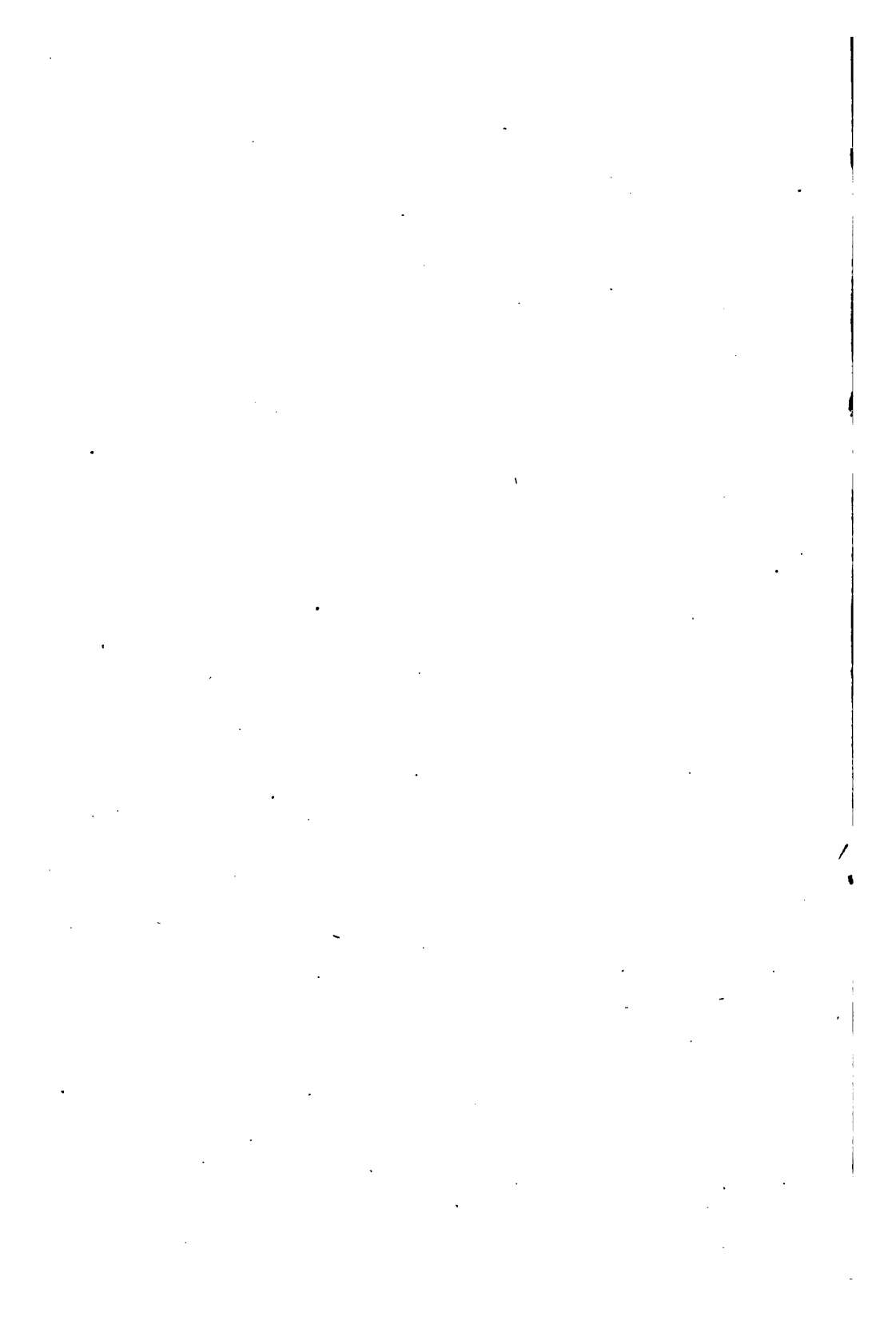
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from the author



CATALOGUE
OF THE REMAINS OF
SIWALIK VERTEBRATA.



CATALOGUE
OF THE REMAINS OF
SIWALIK VERTEBRATA

CONTAINED IN
THE GEOLOGICAL DEPARTMENT
OF
THE INDIAN MUSEUM,
= CALCUTTA. *Biological dept.*

PART I.
MAMMALIA.

BY
RICHARD LYDEKKER, B.A., F.G.S., ETC.

54

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INTRODUCTION.

1-20-26 E. J. J.

Object and extent.—The present catalogue comprises all the more important specimens and casts of vertebrate remains from the Siwaliks of India and Burma contained in the Indian Museum. All the specimens, except duplicates, which can be specifically, and many of those which can only be generically, determined have been included; but it has been felt that it would be merely a useless incumbrance to include all those specimens of which the genus, and in many cases even the family, cannot be determined with any approach to certainty. As a large number of the more interesting specimens have been described and figured in the 10th series of the 'Palæontologia Indica' it has been held unnecessary to make this catalogue a descriptive one; its object being to afford an index to the specimens contained in the Museum, and thus supplement the information given in the 'Palæontologia Indica.' In a few instances, however, where very interesting specimens have not been figured, a short notice of some of their characteristics is given. References are in all cases given to the plates where individual specimens are figured; and as in some cases the original determinations of such specimens figured in the 'Palæontologia Indica' have been found erroneous, this catalogue cites the specimens under their new title. Under the distinctive number of each figured specimen the word *Fig.* is printed, in order to facilitate reference. The list of numbers at the end will enable any student working at the collection at once to find the specific determination of any individual specimen.

Upper and Lower Siwalik.—All the specimens recorded from Sind, Kach, Dera Būgti, and the Būgti Hills, are from the Lower Siwaliks; those from the typical Siwalik Hills, Burma, and Perim Island are probably all Upper Siwalik; while those from the Punjab not improbably comprise a mixture of Upper and Lower Siwalik forms.

Homology of teeth.—All the teeth of mammals are here referred to their respective position in the typical heterodont eutherian series. As in the first volume of the 10th series of the 'Palæontologia Indica' the milk and premolar teeth of the Proboscidea were not numbered in accordance with this system,

their serial numbers are different from those which they bear here. The difference consists in each tooth being reckoned one place further back, thus mm. 1 in vol. I=mm. 2 here; mm. 2=mm. 3; and mm. 3=mm. 4.

Origin of the collection.—The magnificent Siwalik collection of the Indian Museum (which is only equalled by that of the British Museum, and contains many types unknown to the latter) has been gathered from various sources, the most important of which are as follows :¹—

- 1.—A large collection of specimens from the typical Siwalik Hills, Perim Island (Gulf of Cambay), and Burma, originally belonging to the Asiatic Society of Bengal, and transferred to the Indian Museum in 1875. These specimens (together with others from the Narbada) have been already catalogued by Falconer and Walker²; but as a very large proportion of them consists of generically undeterminable limb-bones and vertebræ, only a small moiety has been introduced into this catalogue. These specimens have been renumbered, but in many cases the numbers borne by them in Falconer's and Walker's catalogue have been added.³ The specimens belonging to this and the next series are referred to in the sequel as the '*A. S. B. Collection*.'
- 2.—A series of casts of typical specimens mainly in the collection of the British Museum, presented to the Asiatic Society of Bengal by the Court of Directors of the Honourable East India Company, and transferred to the Museum with the last series. Only the more important specimens have been catalogued.
- 3.—A few specimens of teeth from Khushálgarh, on the Indus below Attock, collected by Lieutenants Garnett and Trotter previously to 1858, and presented to the Survey.
- 4.—Some specimens collected by Colonel H. H. Godwin-Austen in the Siwalik Hills, and presented to the Survey in 1865.

¹The Calcutta specimens of teeth are usually much more beautifully preserved than those in the British Museum, owing to the soft nature of the sandstone in which many of the specimens from the Punjab are embedded.

²'Descriptive Catalogue of the Fossil Remains of Vertebrata from the Siwalik Hills, &c., in the Museum of the Asiatic Society of Bengal' 8vo., Calcutta, 1859.

³The writer having compiled this catalogue in England from a M.S. rough copy has been unable to give these numbers in all instances.

- 5.—A small series of specimens from various localities acquired by the Museum previously to 1874, or transferred from the Asiatic Society of Bengal without history. Many of these specimens were collected by officers of the Survey. These specimens are entered in the sequel as having no history.
- 6.—A very large series collected by Mr. William Theobald, late Deputy Superintendent of the Survey, between the years 1873 and 1881. This series is the most important in the whole collection, and was chiefly obtained from the Punjab, although a considerable moiety came from the western part of the typical Siwalik Hills.
- 7.—An important series collected by Mr. W. T. Blanford, late Senior Deputy Superintendent of the Survey, and Mr. F. Fedden, of the Survey, from the Lower Siwaliks of Sind and Kach.
- 8.—A small series obtained by Mr. A. B. Wynne, late of the Survey, from the Punjab; mainly between the years 1873 and 1878.
- 9.—A few specimens collected by Mr. Fedden in 1881 from Perim Island.
- 10.—Some specimens obtained by exchange with the Museums at Lahore and Rûrki between the years 1879 and 1881.
- 12.—Some specimens collected by the late Dr. Verchère in the Derajât district (Punjab) and presented to the Museum by his executors in 1879.
- 13.—A small but very interesting series collected by Mr. W. T. Blanford in the Bûgti Hills and Dera Bûgti during the winter of 1881-82.
- 14.—A series of casts of specimens in the British Museum, purchased at various times between 1878 and 1882.
- 15.—A few casts obtained by exchange with the Museum of the Royal College of Surgeons in 1881.
- 16.—A small collection from Perim Island made by the late Dr. Wilson of Bombay, and presented by Captain Searle, Superintendent of Marine, Calcutta, in 1882 (See Rec. Geol. Surv., Ind. vol. XV., pp. 104-5 [1882]).
- 17.—A few casts of specimens which were in the Museum of the Survey before 1874, but of which there is no record as to how they were obtained.

Abbreviations.—The abbreviations of serials are the same as those employed in the 'Geological Record' for 1878, and in

Part I of the writer's "Catalogue of the Fossil Remains of Mammalia in the British Museum" (London, 1885). The following only require notice here: *F. A. S.*=Falconer and Cautley's "Fauna Antiqua Sivalensis," (London 1846 to 1849.)

Pal. Mem. or Palæontological Memoirs=Murchison's "Palæontological Memoirs, &c., of Hugh Falconer" (London, 1868).

Pal. Ind.=Palæontologia Indica (Mem. Geol. Surv. Ind.).

RICHARD LYDEKKER.

THE LODGE, HARPENDEN,
HERTFORDSHIRE.

June 1885.

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CATALOGUE
OF
SIWALIK VERTEBRATA.

Class **MAMMALIA.**

Order **PRIMATES.**

Suborder **ANTHROPOIDEA.**

Family **SIMIIDÆ.**

Genus **PALÆOPITHECUS**, *Lyd.*

'*Rec. Geol. Surv. Ind.,*' vol. xii., p. 33 (1879).

Palæopithecus sivalensis, *Lyd.*

'*Rec. Geol. Surv. Ind.,*' vol. xii., p. 33 (1879).

- D. 1.** The palate; from Jabi, Punjab. This specimen is the type
Fig. and is figured in the '*Records*' vol. xii., plate facing p. 52,
figs. 1, 5. *Collected by Mr. Theobald.*

Family **CERCOPITHECIDÆ.**

Genus **MACACUS**, *Cuv. and Geoff.*

'*Magasin Encyclopédique*' (1795), (*teste Geoff.*). *Macaque.*

Macacus sivalensis, *Lyd.*

'*Rec. Geol. Surv. Ind.,*' vol. xi., p. 70 (1878).

- D. 2.** Two fragments of the maxilla; from Asnot, Punjab. These
Fig. specimens are the types and are figured in the xiith volume
of the '*Records*,' plate facing p. 52, figs. 2, 4.
Collected by Mr. Theobald.

Genus **CYNOCEPHALUS**, *Lacépède.*

"*Nouv. Tab. Meth.*" (1799), in '*Mem. de l'Institut.,*' vol. iii.,
p. 490 (1801).

Cynocephalus subhimalayanus (H. v. Meyer).

Syn. *Semnopithecus subhimalayanus*, H. v. Meyer.

In Bronn's "Index Palæontologicus," p. 1133 (1848).

- D. 3. Cast of the anterior portion of the right maxilla and premaxilla. The original, which is the type, is from the Siwalik Hills, and is in the British Museum (No. 31157). It is figured in the 'Pal. Mem.,' vol. i., pl. xxiv., figs. 1, 2, and is referred to the present genus in the writer's "Catalogue of Fossil Mammalia in the British Museum," part i., p. 4 (1885). *A. S. B. Collection.*

Cynocephalus, sp., Lyd.

"Catalogue of Fossil Mammalia in the British Museum," part i., p. 6 (1885).

- D. 4. Cast of the mandible. The original is from the Siwalik Hills, and is in the British Museum (No. 15709); it is figured in the 'Pal. Mem.,' vol. i., pl. xxiv., figs. 3, 4.

A. S. B. Collection.

Order CARNIVORA.

Suborder CARNIVORA VERA.

Family FELIDÆ.

Genus MACHÆRODUS, Kaup.

"Oss. Foss. de Darmstadt," pt. 2, p. 24 (1833), (*Machairodus*).

Machærodus sivalensis (Falc. and Caut.).

Syn. *Drepanodon sivalensis*, Falc. and Caut.

"Palæontological Memoirs," vol. i., p. 550 (1868).

- D. 100. Part of the right ramus of the mandible; from the Siwalik Hills, Fig. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xlv., fig. 5.

By exchange with the Rürki Museum.

- D. 105. The right upper canine; from the Punjab. Figured in the Fig. 'Pal. Ind.' ser. 10, vol. ii., pl. xlv., fig. 6.

Collected by Mr. Theobald.

- D. 63. Occipital part of the cranium; from near Hoshiarpur. Figured in the Fig. 'Pal. Ind.' ser. 10, vol. ii., p. 340.

Collected by Mr. Theobald.

- D. 64-5. Casts of two fragments of the maxilla. The originals are from the Siwalik Hills, and are in the British Museum (Nos. 16350, 39730); they are figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xlv., figs. 1, 2. *Purchased.*
- D. 66-8. Casts of the three fragments of the mandible. The originals are from the Siwalik Hills, and are in the British Museum (Nos. 16557, 16554); the first is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xlv., fig. 4. *Purchased.*

Machærodus palæindicus, Bose.

- 'Quart. Journ. Geol. Soc.,' vol. xxxvi., p. 825 (1880).
- D. 104. The third left upper incisor; from Asnot, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xliii., fig. 9. *Collected by Mr. Theobald.*
- D. 61-62. Casts of part of crania. The originals are in the British Museum (Nos. 39728-39729). *A. S. B. Collection.*

Genus **FELIS**, Linn.

"Syst. Nat." ed. 12, vol. i., p. 61 (1766).

Felis cristata, Falc. and Cant.

"Asiatic Researches," vol. xix., p. 135 (1836).

Syn. *F. grandicristata*, Bose.

- D. 72. Cast of the cranium. The original is from the Siwalik Hills, and is in the Museum of the Royal College of Surgeons (No. 358); it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xliii. *A. S. B. Collection.*
- D. 71. Cast of the hinder half of the cranium. The original (which is the type of *F. grandicristata*) is from the Siwalik Hills, and is in the British Museum (No. 49176); it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xl., fig. 2. *A. S. B. Collection.*
- D. 73. Cast of an imperfect cranium. The original is from the Siwalik Hills, and is in the British Museum (No. 49176); it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xl., fig. 1. *A. S. B. Collection.*

Felis (? Cynælurus) brachygnatha, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 326 (1884).

- D. 69-70. Casts of two fragments of the mandible. The originals are from the Siwalik Hills, and are in the British Museum (Nos. 16537, 16573); they are figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xliii., figs. 1, 2. *Purchased.*

Felis, sp., Lyd. (allied to *F. lynx*).

'Pal. Ind.' ser. 10, vol. ii., p. 329 (1884).

- D. 90. Anterior portion of the left ramus of the mandible, containing
Fig. the two premolars; from Jabi, Punjab. Figured in the 'Pal.
 Ind.' ser. 10, vol. ii., pl. xliii., fig. 7.

Collected by Mr. Theobald.

Felis, sp.

- D. 77. A right lower canine; from the Punjab. Figured in the 'Pal.
Fig. Ind.' ser. 10, vol. ii., pl. xliii., fig. 3.

Collected by Mr. Theobald.

The following specimens are not generically determined.

- D. 78. The distal half of the right femur; from the Punjab. Figured
Fig. in the 'Pal. Ind.' ser. 10, vol. ii., pl. xlv., fig. 2.

Collected by Mr. Theobald.

- D. 75. The proximal extremity of the right ulna; from Asnot, Punj-
 ab.

Collected by Mr. Theobald.

- D. 79. The patella; from the Punjab. Figured in the 'Pal. Ind.' ser.
Fig. 10, vol. ii., pl. xlv., fig. 4.

Collected by Mr. Theobald.

- D. 80. The right calcaneum; from the Punjab. Figured in the 'Pal.
Fig. Ind.' ser. 10, vol. ii., pl. xlv., fig. 6.

Collected by Mr. Theobald.

- D. 81-5. Four associated broken metapodials and a first phalangeal;
 from Jabi, Punjab.

Collected by Mr. Theobald.

- D. 86. A first phalangeal; from the Punjab. Figured in the 'Pal.
Fig. Ind.' ser. 10, vol. ii., pl. xliii., fig. 10.

Collected by Mr. Theobald.

- D. 87. A lateral metapodial; from the Punjab.

Collected by Mr. Theobald.

- D. 88. A caudal vertebra; from the Punjab.

Collected by Mr. Theobald.

- D. 89. A late caudal vertebra; from the Punjab.

Collected by Mr. Theobald.

- D. 91. A left calcaneum; from Jabi, Punjab. Figured in the 'Pal.
Fig. Ind.' ser. 10, vol. ii., pl. xlv., fig. 7.

Collected by Mr. Theobald.

- D. 92. The distal extremity of a radius ; from Asnot, Punjab.
Collected by Mr. Theobald.
- D. 93. The proximal extremity of a radius ; from Asnot, Punjab.
Collected by Mr. Theobald.
- D. 94. The proximal extremity of an ulna ; from Asnot, Punjab.
Collected by Mr. Theobald.

Genus **ÆLUROGALE**, Filhol.

'Ann. Sci. Géol.' vol. iii., art. 7, p. 14 (1872).

Ælurogale sivalensis, Lyd.

Syn. *Pseudælorus sivalensis*, Lyd.

'Rec. Geol. Surv. Ind.,' vol. x., p. 83 (1877).

- D. 95. The right ramus of the mandible, showing the carnassial, and
Fig. the sockets of the other teeth ; from the Punjab. Figured in
 the 'Pal. Ind.' ser. 10, vol. ii., pl. xlv., fig. 7 (*type*).
Collected by Mr. Theobald.

Genus **ÆLUROPSIS**, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 316 (1884).

Æluropsis annectans, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 316 (1884).

- D. 41. Part of the right ramus of the mandible, with $\overline{\text{pm. 4.}}$ $\overline{\text{m. 1.}}$
Fig. and the alveolus of $\overline{\text{m. 2}}$; from Asnot, Punjab. Figured
 in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxiii., fig. 4 (*type*).
Collected by Mr. Theobald.

Family HYÆNIDÆ.

Genus **HYÆNA**, Zimm.

"Specimen Zoologiæ Geographicæ," p. 365 (1777).

Hyæna felina, Bose.

"Quart. Journ. Geol. Soc.," vol. xxxvi., p. 130 (1880).

- D. 48. Cast of the cranium. The original is from the Siwalik
 Hills, and is in the British Museum (No. 15902). It is
 figured by Bose in the memoir cited. *A. S. B. Collection.*
- D. 102. The left ramus of the mandible of an immature individual ;
Fig. from near Jamu. Figured in the 'Pal. Ind.' ser. 10, vol. ii.,
 pl. xxxviii., fig. 1, and xxxix., fig. 1.
Collected by Mr. Theobald.

- D. 50. Part of the right ramus of a mandible provisionally referred to the present species; from the Siwalik Hills. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxix., fig. 3.
A. S. B. Collection (No. S. 849).
- D. 55. Outer upper incisor, provisionally referred to the present species; from Asnot, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxv., fig. 3. *Collected by Mr. Theobald.*

***Hyæna colvini*, Lyd.**

'Pal. Ind.' ser. 10, vol. ii., p. 290 (1884).

- D. 47. Anterior portion of the cranium; from the Siwalik Hills. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxv., fig. 2 (*type*).
A. S. B. Collection (No. S. 848).
- D. 45. The cranium of an immature individual; from the Siwalik Hills. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxv., fig. 1, pl. xxxvi., fig. 1. *A. S. B. Collection (No. S. 847).*
- D. 46. Part of the left maxilla of a young individual, showing the carnassial *in alveolo*; from the Kangra district. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxv., fig. 5.
Collected by Mr. Theobald.
- D. 101. Fragment of the left maxilla, with the last three teeth; from the Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxv., fig. 4.
Collected by Mr. Theobald.
- D. 51. Fragment of the left ramus of the mandible, with $\overline{\text{pm. 4}}$ and $\overline{\text{m. 1}}$; from the Siwalik Hills. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxviii., fig. 3, pl. xxxix., fig. 4.
A. S. B. Collection (No. S. 851).

***Hyæna sivalensis*, Bose.**

'Quart. Journ. Geol. Soc.,' vol. xxxvi., p. 128 (1880).

- D. 49. Cast of the cranium. The original, which is the type, is in the British Museum (No. 37133), and came from the Siwalik Hills; it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxiv.
A. S. B. Collection.
- D. 53. Hinder portion of the right ramus of the mandible, with $\overline{\text{pm. 4}}$, $\overline{\text{m. 1}}$ and the alveolus of $\overline{\text{m. 2}}$; from Asnot, Punjab. Figured in the 'Pal. Ind.' *op. cit.* pl. xxxviii., fig. 2, pl. xxxix., fig. 5.
Collected by Mr. Theobald.

Hyæna macrostoma, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 298 (1884).

- D. 44. Cranium; from Jabi, Punjab. This specimen is the type.
Fig. and is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxvii.
Collected by Mr. Theobald.

- D. 52. Anterior part of the left ramus of the mandible; from Jabi.
Fig. Figured in the 'Pal. Ind.' *op cit.* pl. xxxviii., fig. 4,
 pl. xxxix., fig. 6. *Collected by Mr. Theobald.*

- D. 56. Part of the left upper carnassial; from Asnot, Punjab.
Collected by Mr. Theobald.

Hyæna, *sp. non det.*

- D. 54. Third left upper incisor; from Asnot.
Collected by Mr. Theobald.

- D. 58. An upper premolar; from Asnot.
Collected by Mr. Theobald.

- D. 59-60. Casts of maxillæ. The originals are from the Siwalik Hills,
 and are in the British Museum. *A. S. B. Collection.*

Genus LEPHTHYÆNA, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 312 (1884).

Lepthyæna sivalensis, Lyd.

Syn. Ictitherium sivalense, Lyd.

'Rec. Geol. Surv. Ind.,' vol. x., p. 32 (1877).

- D. 38. The greater part of the mandible; from Asnot, Punjab.
Fig. This specimen is the type, and is figured in the 'Pal. Ind.'
 ser. 10, vol. ii., pl. xlv., figs. 8, 9.
Collected by Mr. Theobald.

Family VIVERRIDÆ.**Genus VIVERRA**, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 63 (1766).

Viverra bakeri, Bose.

"Quart. Journ. Geol. Soc.," vol. xxxvi., p. 131 (1880).

- D. 42. Cast of the cranium. The original, which is the type, is from
 the Siwalik Hills, and is in the British Museum (No.

40183) ; it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxiii., fig. 1.
A. S. B. Collection.

***Viverra durandi*, Lyd.**

'Pal. Ind.' ser. 10, vol. ii., p. 271 (1884).

- D. 43. Cast of the anterior part of the cranium. The original is from the Siwalik Hills, and is in the British Museum (No. 37150) ; it is figured in the 'F. A. S.' pl. Q., fig. 2.
A. S. B. Collection.

Family URSIDÆ.

Subfamily CANINÆ.

Genus CANIS, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 56 (1766).

***Canis cautleyi*, Bose.**

'Quart. Journ. Geol. Soc.,' vol. xxxvi., p. 135 (1880).

- D. 35. Fragment of the left maxilla ; from Dádúpúr, Siwalik Hills.
Fig. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxii., fig. 3.
A. S. B. Collection (No. S. 852).
- D. 36. Two specimens of the proximal extremity of the femur of a *Canis* ; from the Punjab. Collected by Mr. Theobald.
- D. 37. The distal extremity of the femur ; from the Punjab.
Collected by Mr. Theobald.

Genus AMPHICYON, Lartet.

'Comptes Rendus,' vol. v., p. 424 (1837).

***Amphicyon palæindicus*, Lyd. (ex. Falc. MS.).**

'Pal. Ind.' ser. 10, vol. i., p. 84 (1876).

- D. 26. Second right upper true molar ; from Khushálgarh, Punjab.
Fig. This specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxxii., fig. 8.
Presented by Lieuts. Garnett and Trotter.
- D. 23. Fragment of the mandible, with the milk and permanent carnassials ; from Núrpúr. Figured in the 'Pal. Ind.' op. cit. fig. 5.
Collected by Mr. Medlicott.

- D. 24. Two fragments of the lower carnassial; from Sind.
Collected by Mr. Blanford.
- D. 25. Fragment of the mandible, with $\overline{m. 2}$; from Sind. Figured
Fig. in the 'Pal. Ind.' *op. cit.* fig. 4. *Collected by Mr. Fedden.*
- D. 27. A metapodial; from Sind. *Collected by Mr. Fedden.*

Subfamily URSINÆ.

Genus **HYÆNARCTOS**, Falc. and Caut.

In Owen's 'Odontography,' p. 505 (1840-45).

Hyænarctos palæindicus, Lyd.

'Rec. Geol. Surv. Ind.,' vol. xi., p. 104 (1878).

- D. 16. Part of the right maxilla, with last three teeth; from the
Fig. Punjab. This specimen is the type, and is figured in the
 'Pal. Ind.' ser. 10, vol. ii., pl. xxx., fig. 1.
Collected by Mr. Theobald.
- D. 9. Fragment of the left ramus of the mandible, with $\overline{m. 2}$; from
Fig. Jabi, Punjab; figured in the 'Pal. Ind.' *op. cit.* pl. xxxi.,
 fig. 3. *Collected by Mr. Theobald.*
- D. 10. Fragment of the right ramus of the mandible, with $\overline{pm. 4}$ and
Fig. $\overline{m. 1}$; from Jabi. Figured in the 'Pal. Ind.' *op. cit.* fig. 2.
Collected by Mr. Theobald.
- D. 11. The right upper canine; from Jabi, Punjab. Figured in the
Fig. 'Pal. Ind.' *op. cit.* pl. xxx., fig. 3. *Collected by Mr. Theobald.*

Hyænarctos punjabiensis, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 226 (1884).

- D. 6. Last premolars and first two molars of the upper jaw; from
Fig. Asnot, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii.,
 pl. xxx., fig. 2. *Collected by Mr. Theobald.*
- D. 8. The mandible; from Asnot. This specimen, which is the type,
Fig. is figured in the 'Pal. Ind.' *op. cit.* pl. xxxi., fig. 1.
Collected by Mr. Theobald.
- D. 12. Portion of the left maxilla, with last three teeth; from Asnot.
Fig. The last tooth is figured in the 'Pal. Ind.' *op. cit.* p. 228
 (woodcut). *Collected by Mr. Theobald.*

***Hyænarctos sivalensis*, Falc. and Caut.**Syn. *Ursus sivalensis*, Falc. and Caut.

'Asiatic Researches,' vol. xix., p. 193 (1836).

- D. 5. Cast of the cranium. The original, which is the type, is from the Siwalik Hills, and is in the British Museum (No. 39721); it is figured in the 'F. A. S.' pl. O., fig. 1, and the dentition in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxx., fig. 5.

A. S. B. Collection.

- D. 7. Cast of the right ramus of the mandible. The original is from the Siwalik Hills, and is in the British Museum (No. 39722); it is figured in the 'F. A. S.' pl. O., fig. 2.

A. S. B. Collection.

- D. 14. Cast of the right femur. The original is from the Siwalik Hills, and is in the British Museum (No. 39723); it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxix., fig. 1.

A. S. B. Collection.

- D. 15. Cast of the right radius and ulna. The original is from the Siwalik Hills, and is in the British Museum (Nos. 39725-6); it is figured in the 'F. A. S.' pl. O., fig. 4.

*A. S. B. Collection.**The following specimens are generically undetermined.*

- D. 18. A lower (?) canine; from Pegu. Figured in the 'Pal. Ind.' Fig. ser. 10, vol. ii., pl. xxx., fig. 4.

Collected by Mr. Blanford.

- D. 106. A canine; from the Búgti Hills.

Collected by Mr. Blanford, 1882.

- D. 28. Fragment of symphysis; from Sind. *Collected by Mr. Fedden.*

Genus *URSUS*, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 69 (1766).

***Ursus theobaldi*, Lyd.**

'Pal. Ind.' ser. 10, vol. ii., p. 211 (1884).

- D. 17. Cranium, with the teeth hammered off; from the Kangra district. This specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxviii., figs. 1, 2.

Collected by Mr. Theobald.

Family MUSTELIDÆ.

Genus **MELLIVORA**, Storr.

'Prodromus Method. Mam.,' p. 34 (1780).

Mellivora sivalensis, Falc. and Caut.

Syn. *Ursitaxus sivalensis*, Falc. and Caut.

'Pal. Memoirs,' vol. i., p. 553 (1868).

- D. 19. Cast of the cranium. The original, which is the type, is from the Siwalik Hills, and is in the British Museum (No. 40184); it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxvi.

A. S. B. Collection.

Mellivora punjabiensis, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 183 (1884).

- D. 20. Part of the right ramus of the mandible; from Asnot, Punjab.
Fig. This specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxvii., fig. 6.

Collected by Mr. Theobald.

Genus **MELLIVORODON**, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 185 (1884).

Mellivorodon palæindicus, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 185 (1884).

- D. 21. Part of the left ramus of the mandible; from Asnot, Punjab.
Fig. This specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxvii., fig. 7.

Collected by Mr. Theobald.

- D. 22. Fragment of the left ramus of the mandible, with $\overline{m_2}$;
Fig. from Niki, Punjab. Figured in the 'Pal. Ind.' *op. cit.* fig. 8.

Collected by Mr. Theobald.

Genus **LUTRA**, Erxl. (*ex* Ray).

'Syst. Regn. Animal,' p. 445 (1777).

Lutra palæindica, Falc. and Caut.

"Pal. Memoirs," vol. i., pl. xxvii. (1868).

- D. 31. Cast of the cranium. The original, which is the type, is from the Siwalik Hills, and is in the British Museum (No. 37151); it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxvii., fig. 1.

A. S. B. Collection.

- D. 32.** Cast of the left ramus of the mandible. The original is from the Siwalik Hills, and is in the British Museum (No. 37152); it is figured in the 'Pal. Ind.' *op. cit.* fig. 2.

A. S. B. Collection.

***Lutra bathygnatha*, Lyd.**

'Pal. Ind.' ser. 10, vol. ii., p. 1893 (1884).

- D. 33.** Part of the left ramus of the mandible; from the Punjab. This *Fig.* specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxvii., fig. 3. *Collected by Mr. Theobald.*
- D. 34.** Proximal extremity of the left ramus of the mandible; from the Punjab. *Fig.* Figured in the 'Pal. Ind.' *op. cit.* fig. 4. *Collected by Mr. Theobald.*

***Lutra sivalensis* (Falc. and Caut.).**

Syn. *Enhydriodon sivalensis*, Falc. and Caut.

'Palæontological Memoirs,' vol. i., p. 331 (1868).

- D. 103.** Cast of the palatal portion of the cranium. The original is from the Siwalik Hills, and is in the Museum of the Royal College of Surgeons (No. 777 A); it is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxvii., fig. 5.

By exchange with the Museum of the Royal College of Surgeons.

- D. 29-30.** Three casts of imperfect crania. The originals, which are the types, are from the Siwalik Hills, and are in the British Museum; they are figured in the 'Pal. Mem.,' vol. i., pl. xxvii. *A. S. B. Collection.*

Suborder **CARNIVORA PRIMIGENIA.**

Family **HYÆNODONTIDÆ.**

Genus **HYÆNODON**, Laizer and Parieu.

'Comptes Rendus,' vol. vii., p. 442 (1838).

***Hyænodon indicus*, Lyd.**

'Pal. Ind.' ser. 10, vol. ii., p. 349 (1884).

- D. 57.** The fourth left lower premolar; from Khushálgarh, Punjab. *Fig.* This specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. ii., p. 349 (woodcut.)

Presented by Lieuts. Garnett and Trotter.

- D. 76. Two specimens of the third lower true molar provisionally
Fig. referred to this species; from the Punjab. Figured in the
 'Pal. Ind.' ser. 10, vol. ii., pl. xliii., figs. 5, 6.

Collected by Mr. Theobald.

Order RODENTIA.

Suborder *SIMPLICIDENTATA*.

Family SPALACIDÆ.

Genus *RHIZOMYS*, Gray.

'Proc. Zool. Soc.,' 1831, p. 95.

Rhizomys sivalensis, Lyd.

'Rec. Geol. Surv. Ind.,' vol. xi., p. 101 (1878).

Syn. (?) *Typhlodon*, Falc. MS.

- D. 97. Three rami of the mandible; from Jabi, Punjab. These
Fig. specimens are the types, and are figured in the 'Pal. Ind.'
 ser. 10, vol. iii., p. 106.

Collected by Mr. Theobald.

- D. 98. The left calcaneum; from the Punjab. Figured in the 'Pal.
Fig. Ind.' *op. cit.* p. 107.

Collected by Mr. Theobald.

Family HYSTRICIDÆ.

Genus *HYSTRIX*, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 76 (1766).

Hystrix sivalensis, Lyd.

'Rec. Geol. Surv. Ind.,' vol. xi., p. 100 (1878).

- D. 96. Part of the right ramus of the mandible; from Asnot, Punjab.
Fig. This specimen is the type, and is figured in the 'Pal. Ind.'
 ser. 10, vol. iii., p. 109.

Collected by Mr. Theobald.

Order UNGULATA.

Suborder *ARTIODACTYLA*.Family BOVIDÆ.¹Genus **BOS**, Linn.

'Syst. Nat.' ed. 12, vol. i., p. 98 (1766).

Bos acutifrons, Lyd.

'Rec. Geol. Surv. Ind.,' vol. x., p. 30 (1877).

- B. 234.** The frontlet; from Padri. This specimen is the type, and is
Fig. figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xii., fig. 1,
 pls. xiii. & xvi., fig. 2. *Collected by Mr. Theobald, 1876.*

- B. 297.** Two specimens of the atlas vertebra provisionally referred
 to this species; from the Kangra district.
Collected by Mr. Theobald, 1876.

Bos planifrons, Lyd.

'Rec. Geol. Surv. Ind.,' vol. x., p. 30 (1877).

- B. 235.** Two frontlets; from the Kangra district. One specimen is
Fig. the type, and is figured in the 'Pal. Ind.' ser. 10, vol. i.,
 pl. xii., fig. 2, pl. xvi., fig. 4.
Collected by Mr. Theobald, 1876.

Bos platyrhinus, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 119 (1878).

(The distinctness of this form is somewhat doubtful.)

- B. 236.** Lower part of the cranium; from near Umb. This specimen
Fig. is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. i.,
 pl. xiv. *Collected by Mr. Theobald, 1876.*

¹ A large series of limb-bones of various genera of this family and the *Cervidae* are contained in the Museum, but as even their generic determination is impossible, they have not been catalogued.

Genus **BISON**, H. Smith.

In Griffith's 'Animal Kingdom,' vol. v., p. 373 (1827).

Bison sivalensis, Falc.

Syn. *Bos sivalensis*, Falc.

'Pal. Memoirs,' vol. i., p. 555 (1868).

- B. 239. Upper part of the cranium; from near Pinjor. Figured in the 'Pal. Ind.' ser. 10, vol. i., pls. xv. & xvii., fig. 1.

Collected by Mr. Theobald, 1876.

Genus **BUBALUS**, Hamilton Smith.

In Griffith's 'Animal Kingdom,' vol. v., p. 371 (1827).

Bubalus buffelus, Blumenbach.

'Handbuch der Naturgeschichte,' ed. 10, p. 121 (1821), *teste* Fischer.

var. *palæindicus*,¹ Falc.

Syn. *Bos palæindicus*, Falc.

'Catalogue of Fossil Vertebrata of Asiatic Society of Bengal,' p. 230 (1859).

- B. 238. Two imperfect crania; from Bubhor.

Collected by Mr. Theobald.

- B. 421. Cranium; from the Jamu district. Collected by Mr. Theobald.

Bubalus platyceros, Lyd.

'Rec. Geol. Surv. Ind.' vol. x., p. 31 (1877).

Syn. *Bubalus sivalensis*, Rüt.

- B. 237. An imperfect cranium; from Sutor. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xviii., fig. 1.

Collected by Mr. Theobald, 1876.

From a study of the specimens in the British Museum, the writer has come to the conclusion that the two following species, forming the genera *Hemibos* and *Amphibos*, Falc. and Caut. (*Peribos*, Lyd.; *Probubalus*, Rüt.), may be included in the present genus.

¹ The writer has recently come to the conclusion that the Narbada form is only a variety of the living buffalo, and he has been unable to distinguish the form occurring in the topmost Siwaliks from the Narda barace.

Bubalus occipitalis (Falc.).

'Pal. Memoirs,' vol. i., p. 280 (1868).

Syn. *Bos occipitalis*, Falc.; *Hemibos triquetriceros*, Falc. and Caut.; *Peribos occipitalis*, Lyd.; *Probubalus triquetricornis*, Rüt.

- B. 241.** Cranium; from Ganawar Khal, Siwalik Hills. This specimen
Fig. belongs to a male, and may be regarded as the type; it is
 figured in the 'Pal. Ind.' ser. 10, vol. i., pls. xx., xxi.

A. S. B. Collection (No. S. 562).

- B. 342.** Cranium of a male; from the Siwalik Hills. Figured in
Fig. the 'Pal. Ind.' *op. cit.* pl. xxi. A.

By exchange with the Rürki Museum.

- B. 343.** Cranium of a male, with smaller horn-cores; from the
Fig. Kangra district. Figured in the 'Pal. Ind.' *op. cit.* pl. xxiv.

Collected by Mr. Theobald, 1876.

- B. 344.** Cast of the cranium of a male. The original is from the Siwalik
 Hills, and is in the British Museum (No. 39565); it is figured
 by Rüttimeyer in the 'Rinder der Tertiär Epoche,' &c., pl.
 vii., figs. 1, 2, under the name of *Probubalus triquetricornis*
 (wrongly quoted as No. 39563). *A. S. B. Collection.*

- B. 422.** An imperfect cranium; from the Kangra district.

Collected by Mr. Theobald.

- B. 423.** An imperfect cranium; from the Siwalik Hills.

A. S. B. Collection (No. S. 563).

Bubalus acuticornis (Falc. and Caut.).

Syn. *Amphibos acuticornis*, Falc. and Caut.

'Pal. Memoirs,' vol. i., p. 547 (1868).

- B. 240.** Imperfect cranium of an old male; from the Markanda valley,
Fig. Siwalik Hills. Figured in the 'Pal. Ind.' ser. 10, vol. i., pls.
 xxii, xxiii. *Presented by Col. Godwin-Austen, 1866.*

- B. 240a.** The upper portion of the cranium of a male; from the
Fig. Kangra district. Figured in the 'Pal. Ind.' *op. cit.* pl.
 xxiii A. *Collected by Mr. Theobald, 1876.*

- B. 242.** Cranium of a young female, provisionally referred to this
Fig. species; from the Kangra district. Figured in the 'Pal.
 Ind.' *op. cit.* pl. xxi., fig. i., and pl. xxi. B.

Collected by Mr. Theobald, 1876.

- B. 242a. Cranium of a young female; from the Kangra district.
Collected by Mr. Theobald, 1876.
- B. 345. Upper part of a cranium; from the Kangra district.
Fig. Collected by Mr. Theobald, 1876.
- The following specimens are not generically determined.*
- B. 247-9. Three upper and lower jaws; from the Hoshiarpūr district.
Collected by Mr. Theobald.
- B. 250-2. Nine specimens of imperfect upper and lower jaws; from the Kangra and Hoshiarpūr districts.
Collected by Mr. Theobald.
- B. 387. Right maxilla, with two molars; from the Hoshiarpūr district.
(*?* *Bos.*) *Collected by Mr. Theobald.*
- B. 372. Left maxilla; from the Hoshiarpūr district. (*?* *Bos.*)
Collected by Mr. Theobald.

Genus **CAPRA**, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 94 (1766).

Capra sivalensis, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 169 (1878).

- B. 243. Cast of upper part of the cranium. The original, which is the type, is from the Siwalik Hills, and is in the British Museum (No. 39794); it is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxviii., figs. 1, 2. *A. S. B. Collection.*
- B. 243a. Cast of an imperfect cranium. The original is from the Siwalik Hills, and is in the British Museum (No. 36674).
A. S. B. Collection.

Capra perimensis, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 170 (1878).

- B. 244. The frontlet; from Perim Island. This specimen is the type,
Fig. and is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxviii.,
figs. 4, 5. *A. S. B. Collection (No. P. 57).*

Capra, sp., Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 171 (1878).

- B. 246. Three broken horn-cores; from the Potwār district, Punjab.
Fig. One of these specimens is figured in the 'Pal. Ind.' ser.
10, vol. i., pl. xxviii., fig. 3. *Collected by Mr. Theobald.*

- B. 245. The frontlet ; from Niki, Punjab. *Collected by Mr. Theobald.*

Genus **OREAS**, Desmarest.

'Mammalogie,' p. 471 (1822).

Oreas (?) *latidens*, Lyd.

Syn. *Cervus latidens*, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 65 (1876).

- B. 218. Two specimens of the left maxilla ; from the Punjab. One is
Fig. figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. xiii., figs. 12,
 13. *Collected by Mr. Theobald.*

- B. 219-20. Six detached upper true molars ; from the Punjab. One is
Figs. figured in the 'Pal. Ind.' ser. 10, vol. i., pl. viii., figs. 7, 10.
Collected by Mr. Theobald.

Genus **PALÆORYX**, Gaudry.

'Comptes Rendus,' vol. lii., p. 238 (1861).

Palæoryx (?) sp., Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 114 (1884).

- B. 353. Two upper true molars ; from the Punjab. One is figured in
 the 'Pal. Ind.' ser. 10, vol. iii., pl. xiii., figs. 9, 10.
Collected by Mr. Theobald.

Genus **BOSELAPHUS**, Blainville.

'Bull. Soc. Philom. Paris,' 1816, p. 75.

Syn. *Portax*, H. Smith.

Boselaphus, sp., Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 114 (1884).

- B. 213. Part of the left maxilla of an immature individual ; from the
Fig. Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl.
 xiii., fig. 1. *Collected by Mr. Theobald.*

- B. 205. } Five detached upper molars ; from the Punjab. Two are
 B. 206. } figured in the 'Pal. Ind.' *op. cit.* figs. 7, 8, 11.
Fig. *Collected by Mr. Theobald.*

- B. 336. Part of the right maxilla, with mm. 3, mm. 4, and m. 1 ; from
 the Punjab. *Collected by Mr. Theobald.*

- B. 385. Part of the left maxilla of an immature individual; from the Punjab. Figured in the 'Pal. Ind.' *op. cit.* fig. 2.
Collected by Mr. Theobald.
- B. 386. A left upper true molar; from the Punjab.
Collected by Mr. Theobald.
- B. 210. Two portions of the mandible; from the Punjab. One Fig. figured in the 'Pal. Ind.' *op. cit.* fig. 5.
Collected by Mr. Theobald.
- B. 210a. Fragment of the mandible; from the Siwalik Hills.
A. S. B. Collection.
- B. 211. Three imperfect rami of the mandible with milk-dentition; Fig. from the Punjab. Two are figured in the 'Pal. Ind.' *op. cit.* figs. 3, 4.
Collected by Mr. Theobald.
- B. 212. Part of the right ramus of the mandible of an immature individual; from the Siwalik Hills. (Described by Falconer as *Camelopardalis*.) A. S. B. Collection (No. S. 560).
- B. 207. } Six detached lower molars; from the Punjab.
B. 208. }
Collected by Mr. Theobald.
- B. 335. Fragment of the right ramus of the mandible; from the Punjab.
Collected by Mr. Theobald.
- B. 262. } The associated right ramus of the mandible, axis vetrebra
B. 268. } and forelimb; from Niki, Punjab.
Collected by Mr. Theobald.
- B. 355. Part of the right ramus of the mandible, with $\overline{m. 2}$, and $\overline{m. 3}$; from the Punjab.
Collected by Mr. Theobald.
- B. 356. Two lower true molars; from the Punjab.
Collected by Mr. Theobald.

Genus *HIPPOTRAGUS*, Sundevall.

'K. Svenska. Vet-Akad. Handl.' for 1844, p. 196.

Hippotragus sivalensis, Lyd.

Syn. *Antelope sivalensis*, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 154 (1878).

- B. 232. The imperfect cranium of a female, with the crowns of the teeth hammered off; from Sanjwan. This specimen is the

type, and is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxv., figs. 1, 2 : it is referred to the present genus in the 'Geol. Mag.' dec. 3, vol. ii., p. 170.

Collected by Mr. Theobald.

Genus **GAZELLA**, Blainville.

'Bull. Soc. Philom. Paris,' 1816, p. 75.

Gazella porrecticornis, Lyd.

Syn. *Antilope porrecticornis*, Lyd.

'Pal. Ind.,' ser. 10, vol. i., p. 158 (1878).

- B. 229-230.** Several imperfect horn-cores; from the Potwâr district, Punjab. One, which is the type, is figured in the

Fig. 'Pal. Ind.' ser. 10, vol. i., pl. xxv., fig. 4.

Collected by Mr. Theobald.

- B. 228.** Three fragments of the cranium; from the Punjab (the one with complete horn-cores is from Niki).

Collected by Mr. Theobald.

- B. 415.** Various horn-cores; from the Punjab.

Collected by Mr. Theobald.

Genus **ALCELAPHUS**, Blainville.

'Bull. Soc. Philom. Paris,' 1816, p. 75.

Alcelaphus palæindicus (Falc.).

Syn. *Antilope palæindica*, Falc.

'Catalogue of Fossil Vertebrata of Asiatic Society of Bengal,' p. 154 (1859).

- B. 231.** Cranium; from the Siwalik Hills.

A. S. B. Collection (No. S. 581).

- B. 231a.** Cranium; from the Siwalik Hills.

A. S. B. Collection (No. S. 582).

Genus **COBUS**, A. Smith.

'Illust. Zoology of S. Africa,' No. 12 (1840).

Cobus (?) patulicornis, Lyd.Syn. *Antilope patulicornis*, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 157 (1878).

- B. 227.** Two frontlets; from the Hoshiarpur district. One specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxv., fig. 3; it is suggested in the 'Geol. Mag.' dec. 13, vol. ii., p. 171, that the species is allied to *Cobus*.

Specifically undetermined.

- B. 232a.** An imperfect cranium; from the Siwalik Hills.
A. S. B. Collection (No. S. 569).
- B. 347.** Fragment of the right maxilla with m.2 and m.2; from the Punjab.
Collected by Mr. Theobald.
- B. 388.** Fragment of the right maxilla, with two molars; from the Punjab.
Collected by Mr. Theobald.
- B. 222-4.** Nine fragments of mandibles; from the Punjab.
Collected by Mr. Theobald.
- B. 225.** A nearly complete mandible; from Niki, Punjab.
Collected by Mr. Theobald.
- B. 226.** Three fragments of immature mandibles; from the Punjab.
Collected by Mr. Theobald.
- B. 233.** Part of a frontlet; from Niki. *Collected by Mr. Theobald.*

Family GIRAFFIDÆ.

Syn. *Camelopardalidæ*.Genus **SIVATHERIUM**, Falc. and Caut.

'Asiatic Researches,' vol. xix., p. 1 (1836).

Sivatherium giganteum, Falc. and Caut.

'Asiatic Researches,' vol. xix., p. 1 (1836).

- B. 424.** Cast of the cranium. The original, which is the type, is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pls. xci., xcii. *No history.*
- B. 424a.** Portion of the antler; from Ganawar Khal, Siwalik Hills. This specimen is figured in the 'Journ. As. Soc. Beng.,' vol. iv. pl. xlv., fig. 3. *A. S. B. Collection (No. S. 32).*

- B. 361. Cast of the left maxilla, with $\overline{\text{pm. 3}}$, $\overline{\text{pm. 4}}$, and $\overline{\text{m. 1}}$. The original is from the Hoshiarpur district, and is in the Museum of the Royal College of Surgeons (No. 1430).

By exchange with the Museum of the Royal College of Surgeons.

- B. 162. Cast of the right maxilla of a young individual, showing the three milk-molars. The original is from the Siwalik Hills, and is in the British Museum (No. 48928).

Purchased.

- B. 163. A left upper true molar; from the Kangra district. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxi., fig. 1.

Collected by Mr. Theobald.

- B. 165. An upper premolar; from the Siwalik Hills.

A. S. B. Collection (No. S. 330).

- B. 340. The last upper premolar; from the Siwalik Hills.

By exchange with the Rurki Museum.

- B. 161. Fragment of right ramus of the mandible; with $\overline{\text{pm. 4}}$, and $\overline{\text{m. 1}}$, from Niki, Punjab.

Collected by Mr. Theobald.

- B. 162a. Casts of two rami of the mandible. The originals are from the Siwalik Hills, and are in the British Museum. One (B. M. No. 40667) is figured in 'Pal. Mem.' vol. i., pl. xxi., fig. 1, the other (B. M. No. 28106) is unfigured.

No history.

- B. 164. Fragment of left ramus of the mandible, with $\overline{\text{pm. 4}}$ and $\overline{\text{m. 1}}$; from Khatpuráli.

Collected by Mr. Theobald.

- B. 167. Fragment of left ramus of the mandible with $\overline{\text{m. 3}}$; from the Hoshiarpur district.

Collected by Mr. Theobald.

- B. 166. Three associated lower premolars; from near Núrpur.

Collected by Mr. Theobald.

- B. 339. Fragment of right ramus of the mandible, with $\overline{\text{pm. 4}}$; from the Siwalik Hills.

By exchange with the Rurki Museum.

- B. 341. Part of right ramus of the mandible of a young individual Fig. with $\overline{\text{mm. 3}}$, $\overline{\text{mm. 4}}$ and $\overline{\text{m. 1}}$; from the Siwalik Hills. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxi., fig. 3. There is a similar, but more perfect, specimen in the British Museum.

By exchange with the Rurki Museum.

- B. 281. Two specimens of the distal extremity of the left humerus ;
from the Siwalik Hills.
A. S. B. Collection (Nos. S. 335, 339).
- B. 279. Two specimens of the distal extremity of the radius ; from
the Siwalik Hills. *A. S. B. Collection (Nos. S. 340, 341).*
- B. 279a. Distal extremity of the radius ; from the Kangra district.
Collected by Mr. Theobald.
- B. 364. Cast of the right metacarpus. The original is from the Siwalik
Hills, and is in the British Museum (No. 39533) ; it is
figured in the 'F. A. S.' pl. C., fig. 15, and in the 'Pal.
Ind.' ser. 10, vol. ii., pl. xvii., fig. 1. *A. S. B. Collection.*
- B. 384. Cast of head of the left femur. The original is from the
Siwalik Hills, and is in the British Museum (No. 39546) ;
it is figured in the 'F. A. S.' pl. D., fig. 1.
A. S. B. Collection.
- B. 281a. Distal extremity of the left femur ; from the Siwalik Hills.
A. S. B. Collection (No. S. 349).
- B. 282. The tibia ; from Jabi, Punjab. *Collected by Mr. Theobald.*
- B. 282a. The distal extremity of the tibia ; from the Siwalik Hills.
A. S. B. Collection (No. S. 354).
- B. 282b. The distal extremity of the tibia ; from Pinjor.
Collected by Mr. Theobald.
- B. 277. The imperfect calcaneum ; from the Kangra district.
Collected by Mr. Theobald.
- B. 277a. The imperfect calcaneum ; from the Siwalik Hills.
A. S. B. Collection (No. S. 353).
- B. 385a. Cast of the left calcaneum. The original is from the Siwalik
Hills, and is in the British Museum (No. 39543). It is
figured in the 'F. A. S.' pl. D., fig. 12.
A. S. B. Collection.
- B. 278. The astragalus ; from the Punjab.
Collected by Mr. Theobald.
- B. 278a. The astragalus ; from the Siwalik Hills.
A. S. B. Collection (No. S. 350).
- B. 366. Cast of the left astragalus. The original is from the Siwalik
Hills, and is in the British Museum (No. 16998) ; it is
figured in the 'F. A. S.' pl. D., fig. 11.
A. S. B. Collection.

- B. 355.** Cast of the right naviculo-cuboid. The original is from the Siwalik Hills, and is in the British Museum (No. 39544); it is figured in the 'F. A. S.' pl. D., fig. 13.

A. S. B. Collection.

- B. 276a.** Two specimens of the proximal phalangeal; from the Siwalik Hills. *A. S. B. Collection (Nos. S. 355, 356).*

- B. 276.** The proximal phalangeal; from the Kangra district.
Fig. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvii., fig. 9 (wrongly quoted as 270). *Collected by Mr. Theobald.*

- B. 280.** Two specimens of the second phalangeal; from Pinjor.

Collected by Mr. Theobald.

- B. 383.** Cast of part of the atlas vertebra. The original is from the Siwalik Hills, and is in the British Museum (No. 39526); it is figured in the 'F. A. S.' pl. B., fig. 1.

A. S. B. Collection.

- B. 375.** The axis vertebra; from the Siwalik Hills. Figured in the *Fig.* 'Journ. As. Soc. Beng.' vol. iv., pl. xliv., fig. 1.

A. S. B. Collection (No. S. 331).

- B. 375a.** Fourth (?) cervical vertebra; from the Siwalik Hills. Figured in the 'Journ. As. Soc. Beng.' *op. cit.* fig. 2.

A. S. B. Collection (No. S. 332).

- B. 375b.** Sixth cervical vertebra; from the Siwalik Hills.

A. S. B. Collection (No. S. 333).

- B. 374.** Sixth cervical vertebra; from the Siwalik Hills. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxii.

By exchange with the Rürki Museum.

- B. 375c.** First dorsal vertebra; from the Siwalik Hills.

A. S. B. Collection (No. S. 334).

Genus **BRAMATHERIUM**, Falconer.

'Quart. Journ. Geol. Soc.,' vol. i., p. 363 (1845).

Bramatherium *perimense*, Falconer.

'Quart. Journ. Geol. Soc.,' vol. i., p. 365 (1845).

- B. 425.** Cast of the cranium. The original is from Perim Island, and is in the Museum of the Royal College of Surgeons (No. 1436); it is described and figured in the 'Journ. Roy. As. Soc.,' vol. viii., p. 340 (1845).

By exchange with the Museum of the Royal College of Surgeons.

- B. 169.** Cast of the left maxilla. The original is from Perim Island, and is in the British Museum (No. 48933); it is figured in the 'Pal. Mem.' vol. i., pl. xxxiii., figs. 3, 4. *Purchased.*
- B. 170.** Fragment of the right ramus of the mandible, with $\overline{m. 1}$ and *Fig.* $\overline{m. 2}$; from Perim Island. Teeth figured in the 'Pal. Ind.' ser. 10, vol. i., pl. vii., fig. 13.
A. S. B. Collection (No. P. 38).
- B. 170a.** Fragment of the left ramus of the mandible, with four teeth (broken); from Perim Island.
A. S. B. Collection (No. P. 39).
- B. 171.** Two broken metacarpals; from Perim Island. *A. S. B. Collection.*
- B. 172a.** The astragalus; from Perim Island. *A. S. B. Collection.*
- B. 172.** The first phalangeal; from Perim Island. Figured in the *Fig.* 'Pal. Ind.' ser. 10, vol. ii., pl. xvii., fig. 6 (wrongly quoted as 271). *A. S. B. Collection (No. P. 40).*

Genus **HYDASPITHERIUM**, Lyd.

'Rec. Geol. Surv. Ind.,' vol. ix., p. 154 (1876).

Hydaspitherium megacephalum, Lyd.

'Rec. Geol. Surv. Ind.' vol. ix., p. 154 (1876).

- B. 150.** Cranium; from Asnot, Punjab. This specimen is the type, *Fig.* and is figured in the 'Pal. Ind.' ser. 10, vol. i., pls. xxvi., xxvii.
Collected by Mr. Theobald.
- B. 131.** A slightly-worn right upper true molar; from Rohtas, near Jhelam, Punjab.
Collected by Mr. Theobald.
- B. 132.** A left upper true molar; from Asnot.
Collected by Mr. Theobald.
- B. 133.** A right upper true molar; from the Punjab.
Collected by Mr. Theobald.
- B. 134.** A right upper true molar; from the Punjab.
Collected by Mr. Theobald.
- B. 135.** Two fragments of the maxilla of opposite sides belonging to the same individual; from Niki, Punjab. The teeth of the *Fig.* left side are figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xviii., fig. 3.
Collected by Mr. Theobald.

- B. 136. A right upper true molar; from the Punjab.
Collected by Mr. Theobald.
- B. 137. A right upper true molar; from the Punjab.
Collected by Mr. Theobald.
- B. 138. A left upper true molar; from the Punjab.
Collected by Mr. Theobald.
- B. 140. Fragment of the right maxilla, containing the last three premolars; from Jabi, Punjab.
Collected by Mr. Theobald.
- B. 141. Three upper premolars; from the Punjab.
Collected by Mr. Theobald.
- B. 147. The associated third and fourth right upper milk-molars; from the Punjab.
Collected by Mr. Theobald.
- B. 148. Two specimens of the third right upper milk-molar; from the Punjab.
Collected by Mr. Theobald.
- B. 142. The complete ramus of the mandible; from near Jabi, Punjab.
Fig. ab. This specimen is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xix., the ascending ramus being omitted.
Collected by Mr. Theobald.
- B. 143. The worn third left lower true molar; from the Punjab.
Collected by Mr. Theobald, 1877.
- B. 144. The second left lower true molar; from Jabi.
Collected by Mr. Theobald.
- B. 145. Fragment of the left ramus of the mandible, containing $\overline{\text{m. 2}}$
 $\overline{\text{m. 3}}$; from Chakráta, Punjab. *Collected by Mr. Theobald.*
- B. 146. The fourth lower premolar. *Collected by Mr. Theobald.*
- B. 149. Fragment of the right ramus of the mandible, containing
Fig. $\overline{\text{mm. 4}}$, and a part of $\overline{\text{mm. 3}}$; from Niki, Punjab. This specimen is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxi., fig. 4.
Collected by Mr. Theobald.
- B. 149a. The last left lower milk-molar; from Patala, Punjab.
Collected by Mr. Theobald.
- B. 176. Two specimens of the second right lower milk-molar; from
Fig. the Potwár district, Punjab. One figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvi., fig. 3. *Collected by Mr. Theobald.*

- B. 284.** The left calcaneum; from Jabi. Figured in the 'Pal. Ind.'
Fig. ser. 10, vpl. ii., pl. xvii., fig. 7. *Collected by Mr. Theobald.*
- B. 270.** The left carpus and metacarpus (wanting a portion in the
Fig. middle) and an associated proximal phalangeal; from
 Niki, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii.,
 pl. xvii., figs. 10, 11 (wrongly quoted as 276).
Collected by Mr. Theobald.
- B. 369.** Distal extremity of the metatarsus, associated with the last
 specimen. *Collected by Mr. Theobald.*
- Specimens belonging either to this or the next species.*
- B. 371.** An incisor; from the Punjab. *Collected by Mr. Theobald.*
- B. 412.** Various molars; from the Punjab.
Collected by Mr. Theobald.
- B. 274.** The associated distal extremity of the humerus, proximal
 extremity of the radius, and a second phalangeal; from
 Jabi, Punjab. *Collected by Mr. Theobald.*
- B. 320.** The left scaphoid; from Jabi. *Collected by Mr. Theobald.*
- B. 157.** The right scaphoid; from the Punjab.
Collected by Mr. Theobald.
- B. 159.** The left lunar; from the Punjab.
Collected by Mr. Theobald.
- B. 158.** The left cuneiform; from the Punjab.
Collected by Mr. Theobald.
- B. 321.** The right cuneiform; from Jabi.
Collected by Mr. Theobald.
- B. 160.** The left magnum; from the Punjab.
Collected by Mr. Theobald.
- B. 309.** The left magnum; from the Punjab.
Collected by Mr. Theobald.
- B. 272.** The nearly complete tibia; from Niki.
Collected by Mr. Theobald.
- B. 283.** Three specimens of the left naviculo-cuboid; from the
 Punjab. *Collected by Mr. Theobald.*
- B. 273.** Three specimens of the distal extremity of the metatarsus;
 from the Punjab. *Collected by Mr. Theobald.*

- B. 269. Three specimens of the proximal phalangeal; from the Punjab.
Collected by Mr. Theobald.

- B. 367. A proximal phalangeal; from the Punjab.
Collected by Mr. Theobald.

- B. 380. The atlas vertebra; from the Punjab.
Collected by Mr. Wynne.

- B. 381. The axis vertebra; from the Punjab.
Collected by Mr. Theobald.

- B. 376. The fourth cervical vertebra; from the Punjab.
Collected by Mr. Theobald.

- B. 285. The fifth cervical vertebra; from the Punjab.
Collected by Mr. Theobald.

The generic reference of the following is uncertain; all are from the Punjab, and were collected by Mr. Theobald.

- B. 382. A sixth cervical vertebra; from the Siwalik Hills, distinguished from that of *Sivatherium* by its smaller size, longer and narrower centrum, and by the strong keel on the inferior surface. (?) *Helladotherium*.

A. S. B. Collection (No. S. 603).

- B. 407, 410. Various metapodials.

- B. 408. Various carpals and tarsals.

- B. 409. Various phalangeals.

- B. 411. An astragalus.

Hydaspitherium grande, Lyd.

'Rec. Geol. Surv. Ind.,' vol. xi., p. 91 (1878).

- B. 155. Two associated left upper true molars; from the Punjab.
Fig. One is figured in the *'Pal. Ind.'* ser. 10, vol. ii., pl. xxi., fig. 2.
Collected by Mr. Theobald.

- B. 156. The associated first and second left upper molars; from the Punjab.
Collected by Mr. Theobald.

- B. 151. Greater portion of left ramus of the mandible; from the Punjab. This specimen is the type, and is figured in the *'Pal. Ind.'* ser. 10, vol. ii., pl. xx.
Collected by Mr. Theobald.

- B. 152. Part of the right ramus of the mandible with three true molars; from the Punjab.
Collected by Mr. Theobald.

- B. 153.** Part of the right ramus of the mandible, with $\overline{m. 3.}$; from the Punjab. *Collected by Mr. Theobald.*
- B. 154.** Two specimen of the third left lower true molar; from the Punjab. *Collected by Mr. Theobald.*
- B. 275.** Part of the right ramus of the mandible, with the teeth much worn; from Jabi. *Collected by Mr. Theobald.*
- B. 370.** The right calcaneum; from the Punjab. Figured in the *Fig. 'Pal. Ind.' ser. 10, vol. ii., pl. xviii., fig. 1.*
Collected by Mr. Theobald,
- B. 271.** A proximal phalangeal; from Niki. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvii., fig. 8 (wrongly quoted as 172).

Genus **VISHNUTHERIUM**, Lyd.

'Rec. Geol. Surv. Ind.,' vol. ix., p. 103 (1876).

Vishnutherium iravadicum, Lyd.

'Rec. Geol. Surv. Ind.,' vol. ix., p. 103 (1876).

- B. 139.** The associated second and third right upper true molars; *Fig.* from Asnot, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvi., fig. 7. *Collected by Mr. Theobald.*
- B. 168.** A fragment of the left ramus of the mandible; from Burma. *Fig.* Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. vii., figs. 1, 2. This specimen is the type.
Collected by Mr. Blanford.
- B. 286.** The left metatarsal, imperfect inferiorly; from Jabi, Punjab. *Fig.* Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvii., fig. 3. (The reference of this and the next specimen is provisional.)
Collected by Mr. Theobald.
- B. 373.** The centrum of the 6th cervical vertebra; from Asnot, Punjab. *Fig.* Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xviii., fig. 2. *Collected by Mr. Theobald.*

Genus **GIRAFFA**, Zimmermann.

"Geograph. Geschichte," vol. ii., p. 125 (1780).

Syn. *Camelopardalis*, Gmelin (1788).

Giraffa sivalensis, Falc. and Caut.Syn. *Camelopardalis sivalensis*, Falc. and Caut.

'Proc. Geol. Soc.', vol. iv., p. 244 (1843).

Camelopardalis affinis, Falc. and Caut.

- B. 184.** Portions of the associated right and left maxillæ, showing the last four teeth; from Asnot, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvi., figs. 1, 2.
Collected by Mr. Theobald.
- B. 177.** Part of the maxilla with mm. 3, mm. 4, and m. 1; from the Potwâr district, Punjab. *Collected by Mr. Theobald.*
- B. 180.** Part of the right maxilla with m. 2 and m. 3; from the Potwâr district. *Collected by Mr. Theobald.*
- B. 181.** Three detached upper true molars; from the Punjab. *Collected by Mr. Theobald.*
- B. 182.** Two detached upper premolars; from the Punjab. *Collected by Mr. Theobald.*
- B. 183.** Casts of the last upper and lower true molars. The originals are figured in the 'Proc. Geol. Soc.' vol. iv., pl. ii., figs. 4, 5, and the 'Pal. Mem.' vol. i., pl. xvi., figs. 6, 7, and are in the British Museum (Nos. 39756 and 39755); they were obtained from the Siwalik Hills. *Purchased.*
- B. 346.** The third left lower molar (?); from the Punjab. *Collected by Mr. Theobald.*
- B. 406.** Upper molar; from the Punjab. *Collected by Mr. Theobald.*
- B. 173.** Part of the right ramus of the mandible; from Niki, Punjab. Fig. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvi., fig. 5. *Collected by Mr. Theobald.*
- B. 174.** Part of the right ramus of the mandible; from Padri. Fig. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. vii., figs. 14, 15. *Collected by Mr. Theobald.*
- B. 178.** Part of the left ramus of the mandible; with m. 2 and m. 3; from the Potwâr district. *Collected by Mr. Theobald.*

- B. 179.** Three specimens of the last lower true molars; from the
Fig. Potwâr district. One of these is of very small size, and is
figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvi., fig. 6. It
is not improbable that this specimen may really belong to
Palæomeryx. *Collected by Mr. Theobald.*
- B. 185.** The last left lower premolar; from Asnot.
Collected by Mr. Theobald.
- B. 185a.** Cast of the last left lower premolar. The original is from
the Siwalik Hills, and is figured in the 'Proc. Geol. Soc.,'
vol. iv., pl. ii., fig. 6, and in the 'Pal. Mem.' vol. i., pl. xvi.,
figs. 8, 9; it is in the British Museum. *Purchased*
- B. 175.** The last right lower milk-molar; from Asnot. Figured in
Fig. the 'Pal. Ind.' ser. 10, vol. ii., pl. xvi., fig. 8.
Collected by Mr. Theobald.
- B. 363.** Cast of the greater portion of the right humerus. The
original is from the Siwalik Hills, and is figured in the
'F. A. S.' pl. E., fig. 3; it is in the British Museum (No.
39749). *A. S. B. Collection.*
- B. 186.** The associated distal portion of the tarsus metatarsus (im-
perfect inferiorly), and the first phalangeal; from the
Punjab. *Collected by Mr. Theobald.*
- B. 362.** Proximal anterior phalangeal; from the Punjab.
Collected by Mr. Theobald.
- B. 368.** Proximal posterior phalangeal; from the Punjab.
Same history.
- B. 187.** Cast of the fifth (?) cervical vertebra. The original is from
the Siwalik Hills, and is figured in the 'Proc. Geol. Soc.'
vol. iv., pl. iii., in the 'Pal. Mem.' vol. i., pl. xvi., figs. 1 to
4, and in the 'F. A. S.' pl. E., fig. 1 (as 3rd cervical); it
is in the British Museum (No. 39747.) *A. S. B. Collection.*

Genus *non det.*

- B. 189.** Second lower milk, or premolar; from Asnot, Punjab.
Fig. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xvi., fig. 4.
Collected by Mr. Theobald.
- B. 188.** Part of the right ramus of a mandible with $\overline{\text{mm. 2}}$ and
 $\overline{\text{mm. 3}}$; from the Punjab. This specimen probably
belongs to *Hydaspitherium.* *Collected by Mr. Theobald.*

Family CERVIDÆ.

Genus MOSCHUS, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 91 (1766).

Moschus (?) sp., Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 118 (1884).

- B. 437.** The fourth right upper premolar; from the Punjab. This specimen is the type, and is figured on the page cited above.
Collected by Mr. Theobald.

Genus CERVUS, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 92 (1766).

Cervus triplidens, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 67 (1876).

- B. 204.** Fragment of the right maxilla containing m. 2 and m. 3; from the Punjab. This specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. viii., figs. 1, 2.
Collected by Mr. Theobald.

Cervus simplicidens, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 69 (1876).

- B. 204.** Two fragments of the maxilla; from the Punjab. One of these is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. viii., fig. 3.
Collected by Mr. Theobald.
- B. 349.** The anterior portion of the cranium; from the Punjab. The dentition is figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. xiii., fig. 6, and woodcut, p. 119.
Collected by Mr. Theobald.
- B. 209.** Part of the left maxilla, with pm. 4 and the three molars; from the Punjab.
Collected by Mr. Theobald.
- B. 216.** A broken upper true molar; from Sylhet. *No history.*
- B. 350-51.** Detached upper true molars; from the Punjab.
Collected by Mr. Theobald.
- B. 221.** Three fragments of the maxilla; from the Punjab.
Collected by Mr. Theobald.

Cervus sivalensis, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. xvii. (1880).

- B. 215. Fragment of the right ramus of the mandible with $\overline{m. 2}$ and *Fig.* $\overline{m. 3}$; from Maili, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. viii., fig. 5. *Collected by Mr. Theobald*
- B. 338. Part of the left maxilla with $\overline{m. 1}$ and $\overline{m. 2}$, perhaps belonging to a small form of this species; from the Punjab. *Collected by Mr. Theobald.*
- B. 352. Fragment of a right maxilla, belonging to the same species as the last specimen; from the Punjab. *Collected by Mr. Theobald.*

Cervus, sp.

- B. 389. Part of the right maxilla, with the three molars; from the Punjab. This specimen agrees in size with *C. porcinus*. *Collected by Mr. Theobald.*
- B. 348. Fragment of the right maxilla, with the three molars; from the Punjab. This specimen agrees with the last. *Collected by Mr. Theobald.*

Genus **PALÆOMERYX**, H. v. Meyer.

'Die Zähne und Knochen von Georgensgünd,' p. 92 (1834).

Syn *Propalæomeryx*, Lyd.

Palæomeryx sivalensis, Lyd.¹

'Pal. Ind.' ser. 10, vol. ii., p. 173 (1883), (*Propalæomeryx*).

- B. 337. The third left upper molar; from the Siwalik Hills. This *Fig.* specimen is the type, and is figured in the passage cited above. *By exchange with the Rürki Museum.*

Specimens probably belonging to some of the foregoing species.

- B. 201. Three fragments of antlers; from the Punjab. *Collected by Mr. Theobald.*
- B. 202. Two fragments of antlers; from the Punjab. *Collected by Mr. Theobald.*

¹ A recent comparison of the cast of the tooth noticed below with specimens in the British Museum induces the writer to place the species in *Palæomeryx*.

- B. 203. Two fragments of antlers ; from Lehri, Punjab.
Collected by Mr. Wynne.
- B. 217. Fragment of a maxilla ; from the Punjab.
Collected by Mr. Theobald.
- B. 310. Occipital portion of cranium ; from Asnot, Punjab.
Collected by Mr. Theobald.
- B. 95. A lower molar ; from Sind.
Collected by Mr. Fedden.

Family TRAGULIDÆ.

Genus DORCATHERIUM, Kaup.

'Oss. Foss. de Darmstadt,' pt. 5, p. 92 (1836).

Dorcatherium majus, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 62 (1876).

- B. 197. Two detached upper true molars ; from Khushálgarh, Punjab.
Fig. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. vii., figs. 9, 10, 11.
Presented by Lieuts. Garnett and Trotter.
- B. 198. Two fragments of the left maxilla ; from Asnot, Punjab.
Fig. One is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. vii., figs. 4, 6.
Collected by Mr. Theobald.
- B. 199. Three fragments of the maxilla, showing milk and permanent molars ; from the Punjab.
Collected by Mr. Theobald.
- B. 200. The greater portion of the mandible ; from the Punjab.
Collected by Mr. Theobald.

Dorcatherium minus, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 64 (1876).

- B. 195. Fragment of the right maxilla ; from Asnot, Punjab. This
Fig. specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. vii., figs. 3, 7.
Collected by Mr. Theobald.
- B. 196. Detached lower true molars ; from the Punjab.
Collected by Mr. Theobald.

Genus **TRAGULUS**, Pallas (*ex* Brisson).

'Spicilegia Zoologica,' vol. xiii., p. 27 (1779).

Tragulus sivalensis, Lyd.

'Rec. Geol. Surv. Ind.,' vol. xv., p. 30 (1882).

- B. 360.** Third left upper true molar; from Asnot, Punjab. This specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. iii., p. 118. *Collected by Mr. Theobald.*

Family CAMELIDÆ.

Genus **CAMELUS**, Linn.

"Syst. Nat." ed. 12, vol. i., p. 90 (1766).

Camelus sivalensis, Falc. and Caut.

'Asiatic Researches,' vol. xix., p. 120 (1836).

At least one of the specimens of the mandible noticed below belongs to *C. antiquus* ('Rec. Geol. Surv. Ind.' vol. xviii., p. 78), but the writer has not had an opportunity of examining the specimens since that species was founded.

- B. 190.** The imperfect cranium; from Rupar.
Collected by Mr. Theobald.
- B. 190a.** Cast of the imperfect cranium. The original is from the Siwalik Hills, and is figured in the 'F. A. S.' pl. lxxxvii., fig. 1, it is in the British Museum (No. 39597).
A. S. B. Collection.
- B. 194.** Two associated fragments of the maxilla; from Madanpūr.
Collected by Mr. Theobald.
- B. 191.** Two fragments of the mandible; from near Hoshiarpūr.
Collected by Mr. Theobald.
- B. 192.** Two fragments of the mandible; from near Madanpūr.
Collected by Mr. Theobald.
- B. 193.** Fragment of the right ramus of the mandible, with the three true molars; from the Siwalik Hills.
A. S. B. Collection (No. 3. 596).
- B. 193a.** Fragment of the right ramus of the mandible with one true molar; from the Siwalik Hills.
A. S. B. Collection (No. S. 775).

Bones of Ruminants not generically determined. All the specimens, unless it is otherwise stated, were collected by Mr. Theobald from the Punjab and neighbouring districts.

- B. 261. Part of scapula.
- B. 263. Radius.
- B. 318. Part of radius.
- B. 319. Two specimens of distal extremity of radius.
- B. 326. Three specimens of left scaphoid.
- B. 327. Three specimens of lunar.
- B. 328. Three specimens of magnum.
- B. 264. Metacarpus.
- B. 253. Proximal end of femur.
- B. 254. Distal end of femur.
- B. 256. Patella.
- B. 257. Calcaneum.
- B. 258. Astragalus.
- B. 259. Naviculo-cuboid.
- B. 260. Metatarsus.
- B. 265. 1st Phalangeal.
- B. 266. 2nd Phalangeal.
- B. 267. 3rd Phalangeal.
- B. 334. Two specimens of petrosal.
- B. 329. Three specimens of atlas.
- B. 393. Atlas (? *Cervus* or *Antilope*).
- B. 323. Atlas (? *Bos*).
- B. 322. Axis (? *Bos*).
- B. 330. Three specimens of axis.
- B. 392. Axis (? *Cervus* or *Antilope*).
- B. 331. Cervical vertebra.
- B. 391. Third cervical vertebra (? *Bos*).
- B. 390. Fourth cervical vertebra (? *Bos*).
- B. 394. Fourth cervical vertebra.
- B. 377. Fifth cervical vertebra (? *Bos*).
- B. 413. Cervical vertebra.
- B. 325. Dorsal vertebra.
- B. 332. Three dorsal vertebræ.
- B. 334a. Dorsal vertebra ; from Sind. *Collected by Mr. Fedden.*
- B. 414. Dorsal vertebra.
- B. 333. Lumbar vertebra.
- B. 419. Upper molars.
- B. 416. Lower molars.
- B. 417. Fragments of mandibles.
- B. 418. Ditto.
- B. 420. Various bones ; from Sind.

Collected by Messrs. Blanford and Fedden.

Family DICHODONTIDÆ.

Genus **CHÆROMERYX**, Pomel.

'Comptes Rendus,' vol. xxvi., p. 687 (1848).

Syn. *Sivameryx*, Lyd.

The generic identity of *Sivameryx* with *Chæromeryx* has been indicated by the writer in the Geol. Mag., dec. 3, vol. ii, pp. 72-3 (1885), where the latter genus is referred to the present family.

Chæromeryx silistrensis (Pentland).

Syn. *Anthracotherium silistrense*, Pent. (*in parte*).

Sivameryx sindiensis, Lyd.¹

'Trans. Geol. Soc.' ser. 2, vol. ii., p. 394 (1828).

- B. 88. Cast of fragment of the right maxilla, containing mm. 3 and mm. 4. The original, which is the type, is from Káribári, Gáro Hills, and is figured in the 'F. A. S.' pl. lxxviii., figs. 22, 22a. *A. S. B. Collection.*

- B. 91. Right upper true molar; from Sind. This specimen is figured *Fig.* in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxiii., fig. 11, under the name of *Sivameryx*. *Collected by Mr. Blanford.*

- B. 92. Lower molar perhaps belonging to the present species; from Sind. *Collected by Mr. Blanford.*

Family MERYCOPOTAMIDÆ.

Genus **MERYCOPOTAMUS**, Falc. & Caut.

In Owen's 'Odontography,' p. 566 (1840-45).

Meycopotamus pusillus, Lyd.

'Rec. Geol. Surv. Ind.,' vol. xviii, p. 145 (1885).

- B. 324. Fragment of the right maxilla with the third true molar; from Khushálgarh, Punjab. This specimen is the type, and is noticed in the 'Pal. Mem.,' vol. i., p. 416, under the name of *M. nanus*; it will be figured in the Introduction to vol. iii. of ser. 10 of the 'Pal. Ind.'

Presented by Lieuts. Garnett and Trotter.²

¹ Rec. Geol. Surv. Ind., vol. xi., p. 80 (1878).

² This specimen had been sent to the British Museum among Dr. Falconer's collection in 1867, and was transferred to the Indian Museum in 1885.

Merycopotamus dissimilis, Falc. & Caut.

Syn. *Hippopotamus dissimilis*, Falc. and Caut.

'Asiatic Researches,' vol. xix., p. 51 (1836).

- B. 314. Cast of the type cranium. The original is from the Siwalik Hills, and is figured in the 'F. A. S.' pl. lxxvii, fig. 1; it is in the British Museum (No. 18441). *A. S. B. Collection.*

- B. 110. The facial and palatal portion of the cranium of a small male, in a damaged condition; from near Bhimber. Nearly all the dentition is shown, but the crowns of the anterior teeth are broken off; the interval between the canine and the hinder border of m. 3 measures 6·2 inches (=0·158 mm.), and the length of the space occupied by the three true molars 2·8 inches (=0·071 mm.).

Collected by Mr. Theobald.

- B. 112. The anterior portion of the cranium of a young individual, *Fig.* showing m. 1 and m. 2, with pm. 3 and pm. 4 partially protruded. This specimen is figured in the 'Pal. Mem.' vol. i., pl. xv., figs. 1, 2. *No history.*

- B. 315. Cast of the right ramus of the mandible of a male. The original is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pl. lxxvii., fig. 4. *A. S. B. Collection.*

Merycopotamus nanus, Lyd. (*ex*. Falc. and Caut. MS.).

'Geol. Mag.' dec. 3, vol. i., p. 545 (1884).

- B. 111. Middle portion of a cranium probably belonging to this species, showing the hinder cheek-teeth in a very much worn condition; from the Potwár district, Punjab. The length of the space occupied by the three true molars is 2·4 inches (=0·061). *Collected by Mr. Theobald.*

The following specimens belong to one or other of the two preceding species.

- B. 113. Part of the right maxilla with the three true molars, the first being well worn; from Asnot, Punjab.

Collected by Mr. Theobald.

- B. 113a. Part of the right maxilla with the three true molars, the first slightly worn; from Asnot. *Collected by Mr. Theobald.*

- B. 114. Part of the right maxilla with m. 2 and m. 3; from Niki, Punjab. The teeth are much worn, and of large size. (? *M. dissimilis*.) *Collected by Mr. Theobald.*

- B. 114a. Part of the right maxilla with m. 2 and m. 3; from Asnot.
The teeth are similar to those of the last specimen.
Collected by Mr. Theobald.
- B. 115. Fragment of the right maxilla with pm. 4 (broken), m. 1, and m. 2; from the Punjab. *Collected by Mr. Theobald.*
- B. 116. Two detached upper true molars; from the Punjab.
Collected by Mr. Theobald.
- B. 117. Part of the right ramus of the mandible, containing the last four cheek-teeth; from Pegu. (? *M. dissimilis*).
Collected by Mr. Blanford.
- B. 118. Part of the right ramus of the mandible, with the last five cheek-teeth; from Asnot. (? *M. nanus*).
Collected by Mr. Theobald.
- B. 120. Part of the right ramus of the mandible, with the three true molars (m. 1 imperfect); from the Punjab.
Collected by Mr. Theobald.
- B. 120a. Fragment of the right ramus of the mandible with m. 2 and m. 3; from Asnot. *Collected by Mr. Theobald.*
- B. 121. Fragment of the right ramus of the mandible with m. 2 and m. 3, the former much worn; from Asnot. (? *M. nanus*).
Collected by Mr. Theobald.
- B. 119. Part of the right ramus of the mandible of a young individual, showing mm. 4 (wanting the 1st lobe), m. 1, and m. 2 half protruded; from Jabi, Punjab. (? *M. nanus*).
Collected by Mr. Theobald.
- B. 316. Cast of distal end of humerus. *A. S. B. Collection.*

Genus **HEMIMERYX**, *Lyd.*

'*Rec. Geol. Surv. Ind.*,' vol. xi., p. 80 (1878).

Hemimeryx blanfordi, *Lyd.*

'*Pal. Ind.*' ser. 10, vol. ii., p. 167 (1883).

- B. 89. Left upper molar; from Sind. This specimen is the type
Fig. and is figured in the '*Pal. Ind.*' ser. 10, vol. ii., pl. xxiii.,
figs 5, 8. *Collected by Mr. Blanford.*
- B. 90. Two lower molars; from Sind. One figured in the '*Pal. Ind.*'
Fig. *Ind.*' *op. cit.* fig. 1. *Collected by Mr. Blanford.*

Family OREODONTIDÆ.

Genus **AGRIOCHÆRUS**, Leidy.

'Proc. Ac. Nat. Sci. Philad.,' vol. v., p. 121 (1851').

Agriochærus (?) sp., Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 171 (1883).

- B. 94.** Left upper true molar; from Sind. This specimen is figured
Fig. in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxiii., fig. 2.

Collected by Mr. Fedden.

Family ANTHRACOTHERIIDÆ.

Genus **HYOPOTAMUS**, Owen.

'Quart. Journ. Geol. Soc.,' vol. iv., p. 103 (1848).

Hypotamus palæindicus, Lyd.

'Rec. Geol. Surv. Ind.,' vol. x., p. 77 (1877).

- B. 82.** Three right upper molars; from the Laki Hills, Sind. One
Fig. specimen, which is the type, is figured in the 'Pal. Ind.'
 ser. 10, vol. ii., pl. xxiii., figs. 6, 9.

Collected by Messrs. Blanford and Fedden.

- B. 83.** Three left upper molars; from the Laki Hills. One is figured
Fig. in the 'Pal. Ind.' *op. cit.* figs. 4, 7.

Collected by Messrs. Blanford and Fedden.

- B. 84.** Three lower molars; from the Laki Hills. One is figured
Fig. the 'Pal. Ind.' *op. cit.* fig. 3.

Collected by Messrs. Blanford and Fedden.

- B. 85.** Two portions of the mandible, with the crowns of the teeth
Fig. hammered off; from the Laki Hills. One is figured in
 the 'Pal. Ind.' *op. cit.* pl. xxiv., fig. 4.

Collected by Messrs. Blanford and Fedden.

- B. 86.** Part of the left ramus of the mandible with $\overline{m. 1}$ and $\overline{m. 2}$ of
 a small form allied to the present species; from the Laki
 Hills.

Collected by Messrs. Blanford and Fedden.

- B. 359.** Three upper molars; from the Laki Hills.

Collected by Mr. Blanford, 1879.

- B. 93.** Part of cranium; from Sind.

Collected by Mr. Fedden.

¹ This volume is dated 1852.

Hyopotamus giganteus, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 160 (1883).

- B. 427. Third left upper true molar; from Gandoi, Búgti Hills.
Fig. This specimen is the type, and is figured in the 'Pal. Ind.'
 ser. 10, vol. ii., pl. xxiv., fig. 3.
Collected by Mr. Blanford, 1882.

- B. 433. Third left upper true molar; from Gandoi. Figured in the
Fig. 'Pal. Ind.' *op. cit.* p. 161 (woodcut).
Collected by Mr. Blanford, 1882.

- B. 428. Part of the right ramus of the mandible; from Gandoi.
Fig. Figured in the 'Pal. Ind.' *op. cit.* pl. xxv., fig. 2. The
 reference of this and the next specimen is provisional.
Collected by Mr. Blanford, 1882.

- B. 431. Part of the right ramus of the mandible, with $\overline{m. 3}$ (broken);
 from Dera Búgti. *Collected by Mr. Blanford, 1882.*

Genus **ANTHRACOTHERIUM**, Cuv.

'Ossements Fossiles,' 2nd ed., vol. iii., p. 396 (1822).

Anthracotherium hypotamoides, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 152 (1883).

- B. 426. Part of the right maxilla, with $\overline{m. 2}$ (broken) and $\overline{m. 3}$; from
Fig. Gandoi, Búgti Hills. This specimen is the type, and is
 figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xxiv., fig. 2.
Collected by Mr. Blanford, 1882.

- B. 430. Part of the right ramus of the mandible; from Gandoi. Fi-
 gured in the 'Pal. Ind.' *op. cit.* pl. xxv., fig. 1. The
 reference of this and the next specimen is provisional.
Collected by Mr. Blanford, 1882.

- B. 429. Part of the right ramus of the mandible, with $\overline{m. 2}$; from
Fig. Gandoi. Figured in the 'Pal. Ind.' *op. cit.* fig. 3.
Collected by Mr. Blanford, 1882.

Anthracotherium, sp.

(Cf. *A. magnum*, Cuv.)

- B. 432. Part of the left ramus of the mandible, with $\overline{m. 3}$ in a worn
Fig. and broken condition; from Dera Búgti. Figured in the
 'Pal. Ind.' ser. 10, vol. ii., p. 176 (woodcut).
Collected by Mr. Blanford, 1882.

- B. 434. Lower premolar of a large anthracotheroid; from Dera Búgti.
Collected by Mr. Blanford, 1882.

Anthracotherium silistrense, Pentland.Syn. *A. punjabiense*, Lyd.

'Trans. Geol. Soc.' ser. 2, vol. ii., p. 394 (1828).

- B. 103.** Three specimens of right upper true molars; from the Laki Hills, Sind. Two of these specimens are figured in the 'Pal. Ind.' ser. 10, vol ii., pl. xxiii., figs. 10, 12.

Collected by Messrs. Blanford and Fedden.

- B. 106.** Two portions of the rami of the mandible of the same individual; from Niki, Punjab. The right ramus is figured in the 'Pal. Ind.' *op. cit.* pl. xxiv., figs. 1, 1a.

Collected by Mr. Theobald.

- B. 104.** Fragment of the right ramus of the mandible, with $\overline{m. 2}$ and $\overline{m. 3}$; from Asnot, Punjab.

Collected by Mr. Theobald.

- B. 105.** The second right lower true molar; from Sind.

*Collected by Mr. Blanford.**Generically undetermined specimens allied to the foregoing genera.*

- B. 122.** The distal extremity of the ulna; from Sind.

Collected by Mr. Fedden.

- B. 123.** A median metapodial bone; from Sind.

Collected by Mr. Fedden.

- B. 123a.** Two median metapodials; from the Punjab.

Collected by Mr. Theobald.

- B. 124.** Two outer metapodials; from the Punjab.

Collected by Mr. Theobald.

- B. 125.** Two first phalangeals; the larger from the Punjab, the smaller from Sind.

Collected by Messrs. Theobald and Fedden.

- B. 126.** Six second phalangeals; from the Punjab and Sind.

Collected by Messrs. Theobald and Fedden.

- B. 127.** Several astragali; from the Punjab and Sind.

Collected by Messrs. Theobald and Fedden.

- B. 128.** Two specimens of the centrum of the axis vertebra; from the Potwár, Punjab.

Collected by Mr. Theobald.

- B. 379.** An inner metacarpal of a large species; from Sind.

Collected by Mr. Fedden.

- B. 404.** Various specimens; from the Punjab.

Collected by Mr. Theobald.

B. 405. Various specimens; from Sind.

Collected by Messrs. Blanford and Fedden.

Family CHÆROPOTAMIDÆ.

Genus **TETRACONODON**, Falc.

'Palæontological Memoirs,' vol. i., p. 149 (1868).

Tetraconodon magnus, Falc.

'Palæontological Memoirs,' vol. i., p. 149 (1868).

- B. 71. The greater portion of the lower dentition of either side;
Fig. from Asnot, Punjab. The dentition of the right side is
 figured in the 'Pal. Ind.' ser. 10, vol. i., pl. x.

Collected by Mr. Theobald.

Family SUIDÆ.

Genus **HYOTHERIUM**, H. von Meyer.

'Die Zähne und Knochen von Georgensgönd,' p. 43 (1834).

Hyotherium sindiense, Lyd.

'Rec. Geol. Surv. Ind.,' vol. xi., p. 77 (1878).

- B. 96. Three specimens of the second upper true molar¹; from the
Fig. Laki Hills, Sind. One specimen is figured in the 'Pal. Ind.'
 ser. 10, vol. iii., pl. xii., fig. 10.

Collected by Messrs. Blanford and Fedden.

- B. 97. Three specimens of the first upper true molar; from the Laki
Fig. Hills. Two are figured in the 'Pal. Ind.' *op. cit.* figs. 13, 14.

Collected by Messrs. Blanford and Fedden.

- B. 98. Three upper premolars; from the Laki Hills. Two are figured
Fig. in the 'Pal. Ind.' *op. cit.* figs. 9, 15.

Collected by Messrs. Blanford and Fedden.

- B. 102. Fragment of the left maxilla, with $\overline{m. 2}$ and $\overline{m. 3}$; from the
Fig. Laki Hills. Figured in the 'Pal. Ind.' *op. cit.* fig. 6.

Collected by Mr. Fedden.

- B. 99. Four lower true molars; from the Laki Hills. Two are figured
Fig. in the 'Pal. Ind.' *op. cit.* figs. 7, 8.

Collected by Messrs. Blanford and Fedden.

¹ The reference of this and some of the following specimens is provisional.

- B. 100. Fragment of the right ramus of the mandible, with $\overline{\text{mm.4}}$ and $\overline{\text{m.1}}$; from the Laki Hills. Figured in the 'Pal. Ind.' *op. cit.* fig. 16. Collected by Messrs. Blanford and Fedden.

Hyotherium, sp., Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 97 (1884).

- B. 101. Fragment of the left ramus of the mandible, with $\overline{\text{m.2}}$; from Perim Island. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. xii., fig. 5. *A. S. B. Collection.*

Genus **SANITHERIUM**, H. von Meyer.

'Palæontographica,' vol. xv., p. 15 (1865).

Sanitherium schlagintweiti, H. von Meyer.

'Palæontographica,' vol. xv., p. 15 (1865).

Syn. *Sus pusillus*, Falc.

- B. 87. Part of the right ramus of the mandible, with $\overline{\text{m.3}}$; from Khushálgarh, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. viii., fig. 7.

Presented by Lieuts. Garnett and Trotter.

Genus **HIPPOHYUS**, Falc. and Caut.

In Owen's 'Odontography,' p. 562 (1840-45).

Hippohyus sivalensis, Falc. and Caut.

In Owen's 'Odontography,' p. 562 (1840-45).

- B. 317. Cast of the cranium. The original, which is the type, is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pl. lxx., fig. 1. *A. S. B. Collection.*
- B. 65. Fragment of the right maxilla, with $\overline{\text{m.2}}$ and $\overline{\text{m.3}}$; from Asnot, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. xii., fig. 17. *Collected by Mr. Theobald.*
- B. 66. Part of the palate with $\overline{\text{m.2}}$ and $\overline{\text{m.3}}$; from the Punjab. Fig. The right side is figured in the 'Pal. Ind.' *op. cit.* fig. 21. *Collected by Mr. Theobald.*
- B. 67. A similar specimen to the last; from Jabi, Punjab. *Collected by Mr. Theobald.*
- B. 69. Three fragments of the mandible; from Asnot. Two are Fig. figured in the 'Pal. Ind.' *op. cit.* figs. 18, 20; the species of fig. 20 is doubtful. *Collected by Mr. Theobald.*

- B. 64.** The symphysis and the hinder portion of each ramus of the
Fig. mandible; from Kolsa, Punjab. Figured in the 'Pal. Ind.'
op. cit. figs. 3, 19. *Collected by Mr. Theobald.*

- B. 398.** Several fragments of teeth and jaws; from the Punjab.
Collected by Mr. Theobald.

Hippohyus, sp.

- B. 62.** An imperfect cranium; from the Potwâr district, Punjab.
Collected by Mr. Theobald.

- B. 63.** An imperfect cranium; from Asnot, Punjab.
Collected by Mr. Theobald.

- B. 68.** Part of the left ramus of the mandible; from Asnot. Figured
Fig. in the 'Pal. Ind.' ser. 10, vol. iii., pl. xii., fig. 4.
Collected by Mr. Theobald.

- B. 70.** Part of the right ramus of the mandible, with pm. 4, m. 1,
 and m. 2; from Asnot. *Collected by Mr. Theobald.*

Genus SUS, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 102 (1766).

Sus giganteus, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 8, pl. lxx. (1847).

Forsyth-Major ('Quart. Journ. Geol. Soc.' vol. xli., p. 3) is inclined to identify the pliocene *S. strossi* of the Val d'Arno with *S. giganteus*, but that species then included *S. falconeri*, so that it is uncertain to which form he refers.

- B. 1.** The nearly complete mandible provisionally assigned to this
Fig. species; from Asnot, Punjab. Figured in the 'Pal. Ind.'
 ser. 10, vol. iii., pl. xi., fig. 1. *Collected by Mr. Theobald.*

Sus titan, Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 59 (1884).

- B. 26.** The cranium, with the mandible attached; from Niki, Punjab.
Fig. This specimen is the type, and is figured in the 'Pal. Ind.'
 ser. 10, vol. iii., pl. ix. *Collected by Mr. Theobald.*

- B. 19.** The crown of the third right upper true molar; from Asnot,
Fig. Punjab. Figured in the 'Pal. Ind.' *op. cit.* pl. vii., fig. 6.
Collected by Mr. Theobald.

- B. 2. Part of the right ramus of the mandible with the four last
Fig. teeth; from the Potwár district, Punjab. Figured in the
'Pal. Ind.' *op. cit.* fig. 4 (misquoted B. 4).

Collected by Mr. Theobald.

- B. 435. Part of the right ramus of the mandible, with m. 4, m. 1,
Fig. and m. 2; from Asnot. Figured in the 'Pal. Ind.' *op. cit.*
pl. viii., fig. 1.

Collected by Mr. Theobald.

- B. 358. Part of the right ramus of the mandible; from the Punjab.

Collected by Mr. Theobald.

- B. 15. The third right lower true molar; from the Potwár district.
Figured in the 'Pal. Ind.' *op. cit.* pl. vii., fig. 3.

Collected by Mr. Theobald.

- B. 13. Distal half of the left radius, associated with No. B 26.
Fig. Figured in the 'Pal. Ind.' *op. cit.* pl. xii., fig. 1.

Collected by Mr. Theobald.

- B. 13a. The third and fourth left metacarpals, associated with the
Fig. last specimen. Figured in the 'Pal. Ind.' *op. cit.* fig. 2.

Collected by Mr. Theobald.

- B. 13b. A proximal phalangeal, associated with the last.

Collected by Mr. Theobald.

- B. 255. Distal portion of the right tibia, associated with the last.

Collected by Mr. Theobald.

Sus falconeri, Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 66 (1884).

- B. 18. Fragment of the right maxilla, with m. 2 and m. 3; from the
Fig. Siwalik Hills. Figured in the 'Pal. Ind.' ser. 10, vol. iii.,
pl. vii., fig. 8.

A. S. B. Collection (No. S. 318).

- B. 16. Fragment of the right ramus of the mandible, with m. 2 and
Fig. m. 3; from the Siwalik Hills. Figured in the 'Pal. Ind.'
op. cit. fig. 2.

A. S. B. Collection (No. S. 319).

The following specimens belong to one or other of the three preceding species. When they were originally numbered by the writer he had not determined the two species S. titan and S. falconeri; and as he has not seen the specimens since those species were established, he is unable to say to which they belong:—

- B. 6. Fragment of the left maxilla, with the three molars; from
Asnot, Punjab.

Collected by Mr. Theobald.

- B. 7. Part of the left maxilla, with $\overline{m. 1}$ and $\overline{m. 2}$; from the Potwár, Punjab.
Collected by Mr. Theobald.
- B. 27. An imperfect cranium; from Jabi, Punjab.
Collected by Mr. Theobald.
- B. 354. The right maxilla of an immature individual; from the Punjab.
Collected by Mr. Theobald.
- B. 20. Three upper molars; from the Punjab.
Collected by Mr. Theobald.
- B. 14. Several upper premolars; from the Punjab.
Collected by Mr. Theobald.
- B. 3. The symphysis of a mandible; from Boghám.
Collected by Mr. Theobald.
- B. 4. Part of left ramus of a mandible; from the Potwár.
Collected by Mr. Theobald.
- B. 5. Part of right ramus of a mandible of a very old individual showing $\overline{m. 2}$ and $\overline{m. 3}$; from the Punjab.
Collected by Mr. Theobald.
- B. 8. Part of left ramus of a mandible showing the canine; from the Punjab.
Collected by Mr. Theobald.
- B. 9. Fragment of left ramus of a mandible with $\overline{pm. 3}$; from the Potwár.
Collected by Mr. Theobald.
- B. 11. Right ramus of the mandible of a small form; from Gugrot.
Collected by Mr. Theobald.
- B. 12. Two portions of lower canines; from the Punjab.
Collected by Mr. Theobald.
- B. 17. The crown of a third lower molar; from the Punjab.
Collected by Mr. Theobald.
- B. 21. Part of left ramus of the mandible, with $\overline{m. 2}$ and $\overline{m. 3}$; from Asnot.
Collected by Mr. Theobald.
- B. 22. A third left lower molar; from the Potwár.
Collected by Mr. Theobald.
- B. 23. Two specimens of the third left lower molar; from Pinjor.
Collected by Mr. Theobald.
- B. 24. A third left lower molar; from the Potwár.
Collected by Mr. Theobald.

B. 25. Fragment of left ramus of the mandible of a young individual showing m. 1 protruded and m. 2 *in alveolo*; from the Punjab.
Collected by Mr. Theobald.

B. 397. Detached teeth, &c.; from the Punjab.
Collected by Mr. Theobald.

Sus hysudricus, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 8, pl. lxx. (1847).

B. 28. An imperfect cranium; from the Punjab.
Collected by Mr. Theobald.

B. 29. The cranium; from Jabi, Punjab.
Collected by Mr. Theobald.

B. 45. Part of the right maxilla, with the three molars; from Asnot,
Fig. Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. viii.,
fig 10.
Collected by Mr. Theobald.

B. 46. Fragment of the left maxilla, with pm. 4, m. 1, and m. 2; from
Fig. Asnot. Figured in the 'Pal. Ind.' *op. cit.* fig. 11.
Collected by Mr. Theobald.

B. 47. A specimen similar to the last, but with the teeth less worn;
from Asnot.
Collected by Mr. Theobald.

B. 30. The right ramus of the mandible; from the Potwâr district,
Fig. Punjab. Figured in the 'Pal. Ind.' *op. cit.* fig. 3.
Collected by Mr. Theobald.

B. 436. Fragment of the left ramus of the mandible, with mm. 4 and
Fig. m. 1; from Khushâlgarh, Punjab. Figured in the 'Pal.
Ind.' *op. cit.* fig. 6.
Collected by Mr. Theobald.

B. 34. Two associated portions of the mandible; from Lehri, Punjab..
Fig. Figured in the 'Pal. Ind.' *op. cit.* fig. 2.
Collected by Mr. Theobald.

B. 31. Part of the left ramus of the mandible; from Asnot.
Collected by Mr. Theobald.

B. 32. Part of the right ramus of the mandible; from the Potwâr
district.
Collected by Mr. Theobald.

B. 33. Part of the right ramus of the mandible of a young individual;
from Padri.
Collected by Mr. Theobald.

B. 35. The symphysis and part of the left ramus of the mandible;
from the Punjab.
Collected by Mr. Theobald.

- B. 36. Part of the left ramus of the mandible, with $\overline{m. 2}$ and $\overline{m. 3}$; from Asnot. *Collected by Mr. Theobald.*
- B. 37. Part of the left ramus of the mandible, with portions of five teeth; from the Potwár district. *Collected by Mr. Theobald.*
- B. 38. The symphysis of the mandible; from the Potwár district. *Collected by Mr. Theobald.*
- B. 39. The alveolar portion of the left ramus of the mandible, showing five cheek-teeth in a well-worn condition; from Asnot. *Collected by Mr. Theobald.*
- B. 50. Fragment of the right ramus of the mandible of a young individual, with $\overline{mm. 4}$ and $\overline{m. 1}$; from Asnot. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. viii., fig. 5. *Collected by Mr. Theobald.*
- B. 40. Fragment of the left ramus of the mandible with $\overline{m. 2}$ and $\overline{m. 3}$; from the Punjab. *Collected by Mr. Theobald.*
- B. 41. Fragment of the left ramus of the mandible, with $\overline{m. 3}$; from the Punjab. *Collected by Mr. Theobald.*
- B. 42. Fragment of the left ramus of the mandible, with $\overline{pm. 3}$, $\overline{pm. 4}$ and $\overline{m. 1}$; from Jabi. *Collected by Mr. Theobald.*
- B. 43. Part of the left ramus of the mandible with $\overline{m. 2}$ and $\overline{m. 3}$; from Niki, Punjab. *Collected by Mr. Theobald.*
- B. 44. Part of the left ramus of the mandible, with the three molars; from the Punjab. *Collected by Theobald.*
- B. 49. Greater portion of the left ramus of the mandible of an adolescent individual; from Pinjor. *Collected by Mr. Theobald.*
- B. 51. Fragment of the right ramus of the mandible of a specimen with milk-dentition; from Asnot. *Collected by Mr. Theobald.*
- B. 52. Two specimens of the left ramus of the mandible of young individuals with milk-dentition; from Asnot. *Collected by Mr. Theobald.*
- B. 53. Fragment of the right ramus of the mandible of a young individual, with $\overline{pm. 3}$, $\overline{mm. 4}$, and $\overline{m. 1}$ in germ; from Jabi. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. viii., fig. 8. *Collected by Mr. Theobald.*

- B. 54. Part of the right ramus of the mandible, with the three true molars ; from Perim Island. *A. S. B. Collection.*
- B. 55. Three specimens of $\overline{m. 3}$; from the Potwár district.
Collected by Mr. Theobald.
- B. 56. Three specimens of $\overline{m. 3}$; from the Laki Hills, Sind.
Collected by Messrs. Blanford and Fedden.
- B. 57. Three fragments of the maxilla ; from the Potwár district.
Collected by Mr. Theobald.
- B. 58. An upper true molar ; from Sylhet. *No history.*
- B. 59-60. Detached molars ; from the Punjab.
Collected by Mr. Theobald.
- B. 396. Detached teeth ; from the Punjab.
Collected by Mr. Theobald.
- B. 48. A metacarpal ; from Asnot. *Collected by Mr. Theobald.*

Sus punjabiensis, Lyd.

‘Rec. Geol. Surv. Ind.,’ vol. xi., p. 81 (1878).

- B. 61. Hinder part of the left ramus of the mandible, with the three molars ; from Asnot, Punjab. This specimen is the type, and is figured in the ‘Pal. Ind.’ ser. 10, vol. iii., pl. viii., fig. 9.
Collected by Mr. Theobald.

Sus, sp., Lyd.

- B. 10. Portion of the left ramus of the mandible, with canine, $\overline{pm. 3}$ and $\overline{pm. 4}$; from Asnot, Punjab. Figured in the ‘Pal. Ind.’ *op. cit.* pl. viii., figs. 4, 4a. *Collected by Mr. Theobald.*

Sus, sp.

- B. 438. Fragment of the right ramus of the mandible with $\overline{m. 3}$; from the Hoshiarpur District. This specimen is apparently distinct from any of the species noticed above ; it will be figured in the Introduction to vol. iii of ser. 10 of the ‘Pal. Ind.’
Collected by Mr. Theobald.

Family HIPPOPOTAMIDÆ.

Genus HIPPOPOTAMUS, Linn.

Including *Hexaprotodon* and *Tetraprotodon*, Falc. and Caut.

‘Syst. Nat.,’ ed. 12, vol. i., p. 101 (1766).

Hippopotamus sivalensis, Falc. and Caut.

'Asiatic Researches,' vol. xix., p. 40 (1836).

- B. 287.** Three crania ; from the Punjab. *Collected by Mr. Theobald.*
- B. 288.** Two crania ; from the Punjab. *Collected by Mr. Theobald.*
- B. 288a.** The cranium (marked G. A.) ; from the Márkanda valley.
Presented by Col. Godwin-Austen, 1866.
- B. 289.** Three crania ; from the Siwalik Hills. *A. S. B. Collection.*
- B. 290.** Three crania ; from the Siwalik Hills. *A. S. B. Collection.*
- B. 303.** Cast of the cranium. The original is from the Siwalik Hills, and is in the British Museum ; it is figured in the 'F. A. S.' pl. lix., fig. 1 ; and in the 'Pal. Ind.' ser. 10, vol. iii., p. 38 (woodcut). *A. S. B. Collection.*
- B. 404a.** The cranium ; from the Punjab. *Collected by Mr. Theobald.*
- B. 80.** Part of the right maxilla, with the three true molars ; from the Kangra district. *Collected by Mr. Theobald.*
- B. 81.** Part of the right maxilla, with the last two milk-molars ; from the Punjab. *Collected by Mr. Theobald.*
- B. 302.** The palate and two fragments of maxillæ ; from the Punjab. *Collected by Mr. Theobald.*
- B. 400.** Several maxillæ ; from the Punjab. *Collected by Mr. Theobald.*
- B. 395.** The left ramus of the mandible of a small specimen ; from the Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. vi., fig. 1. *Collected by Mr. Theobald.*
- B. 74.** Part of the left ramus of the mandible, with the three molars ; from Asnot, Punjab. *Collected by Mr. Theobald.*
- B. 291.** Three specimens of the mandible ; from the Kangra district. *Collected by Mr. Theobald.*
- B. 292.** Three rami of the mandible ; from the Kangra district. *Collected by Mr. Theobald.*
- B. 293.** Three specimens of the mandible ; from the Siwalik Hills. *A. S. B. Collection.*
- B. 301.** Two fragments of the mandible ; from the Punjab. *Collected by Mr. Theobald.*

- B. 401-403. Various portions of mandibles ; from the Punjab.
Collected by Mr. Theobald.
- B. 307. Symphysis of the mandible of a young individual ; from
Padri.
Collected by Mr. Theobald.
- B. 308. A similar specimen to the last. *Same history.*
- B. 75. Three upper true molars ; from the Punjab.
Collected by Mr. Theobald.
- B. 76. An upper true molar ; from the Punjab.
Collected by Mr. Theobald.
- B. 76a. An upper true molar ; from the Siwalik Hills.
A. S. B. Collection.
- B. 78. Two premolars ; from Asnot. *Collected by Mr. Theobald.*
- B. 78a. A premolar ; from the Siwalik Hills. *A. S. B. Collection.*
- B. 79. Two associated well-worn premolars ; from Asnot.
Collected by Mr. Theobald.
- B. 402. Various teeth ; from the Punjab. *Collected by Mr. Theobald.*
- B. 77. Three lower molars ; from the Potwár, Punjab.
Collected by Mr. Theobald.
- B. 294. Three canines ; from the Punjab. *Collected by Mr. Theobald.*
- B. 73. Two broken canines ; from the Potwár.
Collected by Mr. Theobald.
- B. 73a. Part of a canine ; from the Siwalik Hills.
A. S. B. Collection.
- B. 72. The lower canine ; from Asnot. *Collected by Mr. Theobald.*
- B. 295. Three portions of lower canines ; from the Siwalik Hills.
A. S. B. Collection.
- B. 300. The distal extremity of the humerus ; from the Siwalik Hills.
A. S. B. Collection.
- B. 298. Three fragments of the femur ; from the Siwalik Hills.
A. S. B. Collection.
- B. 300a. The patella ; from the Siwalik Hills. *A. S. B. Collection.*
- B. 399. Various limb-bones ; from the Punjab.
Collected by Mr. Theobald.
- B. 357. The cuboid ; from the Punjab. *Collected by Mr. Theobald.*

- B. 378. The astragalus ; from the Punjab. *Collected by Mr. Theobald.*
- B. 299. Two astragali ; from the Punjab. *Collected by Mr. Theobald.*
- B. 296. The axis vertebra ; from the Punjab.
Collected by Mr. Theobald.
- B. 296a. The axis vertebra ; from the Siwalik Hills.
A. S. B. Collection.

Hippopotamus iravaticus, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 7, pl. lvii. (1847).

The following specimens are provisionally referred to this species :—

- B. 304. Two fragments of the mandible ; from Burma. *No history.*
- B. 305. The occiput ; from Burma. *No history.*
- B. 306. Parts of the left humerus, radius, and ulna ; from Burma.
No history.

Family LISTRIODONTIDÆ.

Genus **LISTRIODON**, H. von Meyer.

'Neues Jahrb.,' 1846, p. 466.

Listriodon pentapotamiæ, Falc.

Syn. Tapirus pentapotamiæ, Falc.

'Palæontological Memoirs,' vol. i., p. 415 (1868).

- B. 107. Second and part of third right upper true molars and
Fig. the associated fourth premolars of both sides ; from
Khushālgarh, Punjab. The true molars are the types, and
are figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. viii., figs.
15a and 17. *Presented by Lieuts. Garnett and Trotter.*
- B. 107a. First right upper true molars ; from the Punjab. Figured
Fig. in the 'Pal. Ind.' *op. cit.* fig. 13. *Collected by Mr. Theobald.*
- B. 108. Three associated upper molars, and an incisor ; from Niki,
Fig. Punjab. Figured in the 'Pal. Ind.' *op. cit.* figs. 14, 15, 16.
Collected by Mr. Theobald.

Listriodon theobaldi, Lyd.

'Rec. Geol. Surv. Ind.,' vol. xi., p. 98 (1878).

- B. 109. The second (P) right upper true molar ; from Asnot, Punjab.
Fig. This specimen is the type, and is figured in the 'Pal. Ind.'
ser. 10, vol. iii., pl. viii., fig. 12. *Collected by Mr. Theobald.*

Suborder *PERISSODACTYLA*.Family *EQUIDÆ*.Genus *EQUUS*, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 100 (1766).

Equus sivalensis, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 9, pl. lxxxi., fig. 1 (1849).

- C. 178. Cast of the cranium. The original, which is the type, is in the British Museum, and was obtained from the Siwalik Hills. It is figured in the 'F. A. S.' pl. lxxxi, fig. 1.

A. S. B. Collection.

- C. 179. The cranium; from Padri. The dentition is figured in the Fig. 'Pal. Ind.' ser. 10, vol. ii., pl. xiv., fig. 2.

Collected by Mr. Theobald.

- C. 193. The cranium, with the crowns of the molars broken off, provisionally referred to this species; from Padri. Noticed in the 'Pal. Ind.' *op. cit.* p. 89. *Collected by Mr. Theobald.*

- C. 180. Part of the right maxilla, with the last four cheek-teeth; from Babhor. Noticed in the 'Pal. Ind.' *op. cit.* p. 88.

Collected by Mr. Theobald.

- C. 181. Part of the right maxilla, with the last five cheek-teeth from Fig. Rúpar. Figured in the 'Pal. Ind.' *op. cit.* pl. xiv., fig. 1.

Collected by Mr. Theobald.

- C. 182. Part of the right maxilla of a young individual, with the last Fig. 3 milk-molars and m. 1; from the Hoshiárpúr district. Figured in the 'Pal Ind.' *op. cit.* pl. xv., fig. 1.

Collected by Mr. Theobald.

- C. 183. Cast of the greater part of the right ramus of the mandible. The original, which is in the British Museum, is from the Siwalik Hills, and is figured in the 'F. A. S.' pls. lxxxi., fig. 4, and lxxxii., fig. 2. *A. S. B. Collection.*

- C. 184. The nearly complete mandible; from the Siwalik Hills. Noticed in the 'Pal. Ind.' *op. cit.* p. 90.

A. S. B. Collection (No. S. 303).

Equus namadicus, Falc. and Caut.Syn. *E. palæonius*, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 9, pl. lxxxi. (1849).

- C. 194. The left maxilla, showing the cheek dentition in a well-worn condition; from Padri. Figured in the 'Pal. Ind.' ser. 10. vol. ii., pl. xiv., fig. 3. *Collected by Mr. Theobald.*

- C. 195. Part of the right maxilla, with the last three premolars and Fig. mm. 1; from Kangra. Figured in the 'Pal. Ind.' *op. cit.* pl. xv., fig. 4. *Collected by Mr. Theobald.*

Specifically undetermined specimens.

- C. 186. The premaxillæ of an individual 5 or 6 years old; from the Siwalik Hills. Noticed in the 'Pal. Ind.' ser. 10, vol. ii., p. 89. *A. S. B. Collection (No. S. 305).*

- C. 187. Two upper molars; from the Siwalik Hills. *A. S. B. Collection.*

- C. 187a. An upper molar; from the Kangra district. *Collected by Mr. Theobald.*

- C. 188. Two upper premolars; from the Kangra and Hoshiárpúr districts. *Collected by Mr. Theobald.*

- C. 189. Three upper molars; from the Kangra district. *Collected by Mr. Theobald.*

- C. 190. A left upper milk-molar; from the Kangra district. *Collected by Mr. Theobald.*

- C. 198-200. Nine upper molars; from the Kangra and Hoshiárpúr districts. *Collected by Mr. Theobald.*

- C. 173. Part of the right ramus of the mandible, with the three true molars; from Náhan. Figured in the 'Pal. Ind.' *op. cit.* pl. xii., fig. 5. *A. S. B. Collection (No. S. 307).*

- C. 191. } Six lower molars; from Rúpar. *Collected by Mr. Theobald.*
C. 192. }

- C. 185. The left ramus of the mandible of a young individual, with three milk-molars; from Nanowal. *Collected by Mr. Theobald.*

- C. 196. Part of the left ramus of the mandible of an immature individual, with mm. 3, mm. 4, and the three true molars; from Nanowal. *Collected by Mr. Theobald.*

- C. 203.** Part of the right ramus of the mandible, with pm. 3, pm. 4,
and the three true molars; from Nanowal.
Collected by Mr. Theobald.
- C. 204.** Part of the right ramus of the mandible, with three pre-
molars; from Nanowal. *Collected by Mr. Theobald.*
- C. 202.** The humerus; from Padri. *Collected by Mr. Theobald.*
- C. 205.** The distal extremity of the metacarpus; from the Siwalik
Hills. *A. S. B. Collection.*
- C. 212.** The metacarpus, in two fragments; from Padri.
Collected by Mr. Theobald.
- C. 219.** Two specimens of the patella; from Padri.
Collected by Mr. Theobald.
- C. 201.** Two specimens of the tibia; from Gogret.
Collected by Mr. Theobald.
- C. 208.** Two specimens of the distal extremity of the tibia; from
near Hoshiarpur. *Collected by Mr. Theobald.*
- C. 215.** } Four specimens of the astragalus; from Padri.
C. 216. } *Collected by Mr. Theobald.*
- C. 217.** } Five specimens of the calcaneum; from Padri.
C. 218. } *Collected by Mr. Theobald.*
- C. 211.** The metatarsus; from Padri. *Collected by Mr. Theobald.*
- C. 206.** A first phalangeal; from Deola, on the Bias.
Collected by Mr. Theobald.
- C. 207.** Two specimens of the first phalangeal; from Padri.
Collected by Mr. Theobald.
- C. 210.** Two specimens of the first phalangeal; from Padri.
Collected by Mr. Theobald.
- C. 209.** Two specimens of the second phalangeal; from Padri.
Collected by Mr. Theobald.
- C. 213.** Two specimens of the second phalangeal; from Padri.
Collected by Mr. Theobald.
- C. 214.** Two specimens of the third phalangeal; from Padri.
Collected by Mr. Theobald.

- C. 221. Cast of the atlas vertebra. The original is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pl. lxxxiii., fig. 1. *A. S. B. Collection.*
- C. 220. A cervical vertebra; from Padri. *Collected by Mr. Theobald.*

Genus **HIPPARION**, Christol.

Syn. *Hippotherium*, Kaup.

'Ann. Sci. et Industrie d. Midi. d. l. France,' vol. i., p. 180 (1832),
teste Christol.

Hipparion antilopinum (Falc. and Caut.).

Syn. *Hippotherium antilopinum*, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 9, pl. lxxxii. (1849).

- C. 141. Cast of part of the maxilla, with the six permanent cheek-teeth. The original is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pl. lxxxii., fig. 13. *A. S. B. Collection.*
- C. 138. Palate of a young individual, showing the four milk-molars
Fig. and m. 1; from Niki, Punjab. The left dentition is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xi., fig. 2.
Collected by Mr. Theobald.
- C. 139. Part of the left maxilla, containing pm. 3, pm. 4, m. 1,
Fig. and m. 2; from Niki. Figured in the 'Pal. Ind.' *op. cit.* pl. xi., fig. 1.
Collected by Mr. Theobald.
- C. 174. Part of the right maxilla, with pm. 3, pm. 4, and m. 1; from the Punjab.
Collected by Mr. Theobald.
- C. 149. Three upper molars; from the Punjab.
Collected by Mr. Theobald.
- C. 257. Several upper molars, cut and polished; from the Punjab.
Fig. One is figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. iii., fig. 4.
Collected by Mr. Theobald.
- C. 140. Cast of the right ramus of the mandible, showing most of the permanent cheek-dentition. The original is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pl. lxxxii., fig. 14. *A. S. B. Collection.*
- C. 145. Part of the left ramus of the mandible, showing three premolars, m. 1 and m. 2; from Jabi, Punjab.
Collected by Mr. Theobald.

- C. 146. Part of the left ramus of the mandible, with three premolars and m. 1.; from Perim Island.
A. S. B. Collection (No. P. 34).
- C. 147. Part of the left ramus of the mandible, with the three true molars; from the Punjab. *Collected by Mr. Theobald.*
- C. 148. Part of the left ramus of the mandible of a young individual
Fig. provisionally referred to this species; from the Punjab.
The specimen shows the last three milk-molars and m. 1.,
and is figured in the 'Pal. Ind.' *op. cit.* pl. xii., fig. 1.
Collected by Mr. Theobald.
- C. 152. Part of the left ramus of the mandible, with the three true molars; from the Punjab. *Collected by Mr. Theobald.*
- C. 142. Part of the right ramus of the mandible, with pm. 3., pm. 4. and the three true molars; from Jabi. The teeth are of very small size.
Collected by Mr. Theobald.
- C. 143. Part of the right ramus of the mandible, with three premolars and m. 1.; from Jabi. *Collected by Mr. Theobald.*
- C. 171. Two specimens of the first median phalangeal; from the Punjab. *Collected by Mr. Theobald.*
- C. 150. The atlas vertebra; from Perim Island.
A. S. B. Collection (No. P. 67).

Hipparion theobaldi, Lyd.

Syn. *Sivalhippus theobaldi*, Lyd.

Hippotherium theobaldi, Lyd.

'Rec. Geol. Surv. Ind.,' vol. x., p. 31 (1877).

- C. 175. The damaged cranium of an immature individual, showing milk and permanent molars; from the Punjab.
Collected by Mr. Theobald.
- C. 151. Part of the left maxilla, with pm. 3., pm. 4. and the three true molars; from Niki, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. xi., fig. 3.
Collected by Mr. Theobald.
- C. 153. Part of the left maxilla of a young individual containing the
Fig. four milk-molars (crown of mm. 1 broken off), and m. 1
in alveolo; from Kaipar, Punjab. This specimen is the type,
and is figured in the 'Pal. Ind.' *op. cit.* pl. xi., fig. 4.
Collected by Mr. Theobald.

- C. 154. Fragment of the left maxilla of a young individual, showing mm. 3 and mm. 4; from Niki. Noticed in the 'Pal. Ind.' *op. cit.* p. 83. Collected by Mr. Theobald.
- C. 158. Two fragments of the left maxilla, one showing two pre-molars, and the other the three true molars; from Perim Island. A. S. B. Collection (Nos. P. 34, P. 111).
- C. 155. Three specimens of the second upper true molar; from the Fig. Punjab. One is figured in the 'Pal. Ind.' *op. cit.* pl. xiii., fig. 2. Collected by Mr. Theobald.
- C. 156-157. Six specimens of upper premolars and true molars; from Fig. the Punjab. One premolar is figured in the 'Pal. Ind.' *op. cit.* pl. xiii., fig. 1. Collected by Mr. Theobald.
- C. 159. Three associated fragments of the mandible, probably belong- Fig. ing to the same individual as No. C. 151; from Niki. The left ramus is figured in the 'Pal. Ind.' *op. cit.* pl. xii., fig. 2. Collected by Mr. Theobald.
- C. 160. Fragment of the left ramus of the mandible, with pm. 2 and pm. 3; from the Punjab. Collected by Mr. Theobald.
- C. 161. Part of the left ramus of the mandible, with pm. 4 and the three true molars; from the Punjab. Collected by Mr. Theobald.
- C. 172. Part of the right ramus of the mandible, with pm. 4 and the Fig. three true molars; from Jabi, Punjab. Figured in the 'Pal. Ind.' *op. cit.*, pl. xii., fig. 4. Collected by Mr. Theobald.
- C. 176. Symphysis of the mandible of an 'aged' male; from Jabi. Inferred to belong to *Hipparion*, since no remains of *Equus* have been obtained from the Jabi district. Collected by Mr. Theobald.
- C. 177. Symphysis of the mandible of a still older individual; from Jabi. Collected by Mr. Theobald.
- C. 144. The left ramus of the mandible of a young individual, showing the last three milk-molars and the germ of m. 1; from the Punjab. Collected by Mr. Theobald.
- C. 162-163. Six specimens of lower premolars; from the Punjab. Collected by Mr. Theobald.
- C. 256. Upper molars, cut and polished; from the Punjab. Collected by Mr. Theobald.

Some of the following specimens may belong to H. antilopinum.

- C. 166. The distal extremities of the radius of opposite sides; from Niki. Probably associated with No. C. 151.
Collected by Mr. Theobald.
- C. 228. A carpal bone; from Jabi. *Collected by Mr. Theobald.*
- C. 164. The bones of a fore-foot; from Jabi. This specimen is probably associated with No. C. 151, and is figured in the 'Pal. Ind.' *op. cit.* pl. xiii., fig. 3.
Collected by Mr. Theobald.
- C. 167. The proximal half of the tibia; from Niki. Probably associated with No. C. 151. *Collected by Mr. Theobald.*
- C. 224. Distal extremity of the tibia; from the Potwár district, Punjab. *Collected by Mr. Theobald.*
- C. 168. Three specimens of the astragalus; from Niki.
Collected by Mr. Theobald.
- C. 222. An astragalus; from the Potwár.
Collected by Mr. Theobald.
- C. 225. The calcaneum; from the Potwár.
Collected by Mr. Theobald.
- C. 197. Two specimens of the distal extremity of the metatarsus; from Jabi. *Collected by Mr. Theobald.*
- C. 165. A considerable number of the bones of a hind-foot; from Niki. Probably associated with No. C. 151.
Collected by Mr. Theobald.
- C. 169. Two specimens of the first median phalangeal; from the Punjab. *Collected by Mr. Theobald.*
- C. 170. Two specimens of a first lateral phalangeal; from the Punjab. *Collected by Mr. Theobald.*
- C. 223. A second phalangeal; from the Potwár.
Collected by Mr. Theobald.

Hipparion, sp.

- C. 273. Part of the right maxilla with three cheek-teeth, which have been cut and polished; from Perim Island. Figured in the 'Pal. Ind.' ser. 10, vol. iii., p. 15 (1884).
Collected by Mr. Fedden, 1883.

Family RHINOCEROTIDÆ.

Genus RHINOCEROS, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 104 (1766).

*A. Rhinoceros proper.***Rhinoceros sivalensis**, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 8, pl. lxxiii. (1847).

- C. 20. The cranium with the cheek-teeth much worn; from Nan-
Fig. owal. The third right true molar is figured in the 'Pal.
Ind.' ser. 10, vol. i., pl. iv., fig. 2.

Collected by Mr. Theobald.

- C. 21. The anterior portion of the cranium, with the crowns of the
teeth hammered off; from the Siwalik Hills.

A. S. B. Collection (No. S. 269).

- C. 22. The occipital portion of the cranium; from Jabi, Punjab.

Collected by Mr. Theobald.

- C. 235. Part of the cranium, showing the much-worn molars; from
the Siwalik Hills. *By exchange with the Rürki Museum.*

- C. 28. Fragment of the left maxilla, containing the much-worn pm. 2
and pm. 3; from the Punjab. *Collected by Mr. Theobald.*

- C. 32. The right maxilla, showing all the cheek-teeth, except pm. 1.,
in a much-worn condition; from Asnot, Punjab.

Collected by Mr. Theobald.

- C. 26. The third right upper premolar; from the Punjab. Figured
Fig. in the 'Pal. Ind.' *op. cit.* vol. ii., pl. v., fig. 6.

Collected by Mr. Theobald.

- C. 27. The much-worn associated left pm. 2 and pm. 3; from the
Punjab.

Collected by Mr. Theobald.

- C. 31. A much-worn early left upper premolar; from the Punjab.

Collected by Mr. Theobald.

- C. 38. The first right upper premolar; from the Punjab.

Collected by Mr. Theobald.

- C. 39. An abnormal left upper premolar, provisionally referred to
Fig. this species; from Padri. Figured in the 'Pal. Ind.' *op.*
cit. vol. i., pl. vi., fig. 9.

Collected by Mr. Theobald.

- C. 54. The associated left upper pm. 2 and pm. 3; from Lehri, Punjab.
Collected by Mr. Theobald.
- C. 77. The second right upper premolar; from the Punjab. Figured in the 'Pal. Ind.' *op. cit.*, vol. ii., pl. v., fig. 3.
Collected by Mr. Theobald.
- C. 23. Two specimens of the first or second upper true molar; Fig. from the Punjab. One specimen is figured in the 'Pal. Ind.' *op. cit.*, vol. i., pl. v., fig. 5, and vol. iii., pl. i., fig. 7.
Collected by Mr. Theobald.
- C. 23a. The first or second right upper true molar; from the Punjab. Fig. Figured in the 'Pal. Ind.' *op. cit.*, vol. ii., pl. v., fig. 1.
Collected by Mr. Theobald.
- C. 24. Two imperfect first or second upper true molars; from the Punjab.
Collected by Mr. Theobald.
- C. 29. A much-worn first or second left upper true molar; from the Punjab.
Collected by Mr. Theobald.
- C. 30. A similar specimen to the last; from Niki, Punjab.
Collected by Mr. Theobald.
- C. 33. An imperfect third right upper true molar; from Sind (P var. *intermedius*).
Collected by Mr. Fedden.
- C. 35. Two specimens of the outer wall of an upper true molar; from the Salt-Range.
Collected by Mr. Wynne.
- C. 37. The germ of a first or second left upper true molar; from the Punjab. Figured in the 'Pal. Ind.' *op. cit.*, vol. ii., pl. v., fig. 5.
Collected by Mr. Theobald.
- C. 41. The associated third upper true molars; from Jabi. One Fig. specimen is figured in the 'Pal. Ind.' *op. cit.*, vol. ii., pl. v., fig. 4 (erroneously quoted as C. 11 in description of plate).
Collected by Mr. Theobald.
- C. 43. A third right upper true molar, with a double crochet; from the Punjab.
Collected by Mr. Theobald.
- C. 51. The inner portion of a left upper true molar, perhaps belonging to this species; from Lehri. Figured in the 'Pal. Ind.' *op. cit.*, vol. i., pl. iv., fig. 1 (under the name of *R. palæindicus*).

- C. 46. The right and left maxillæ of a young individual, provisionally referred to this species, and showing the last three milk-molars; from Jabi. The left side figured in the 'Pal. Ind.' *op. cit.*, vol. ii., pl. vi., fig 2. *Collected by Mr. Theobald.*
- C. 40. An early upper milk-molar; from Asnot. *Collected by Mr. Theobald.*
- C. 48. Three specimens of second upper premolars agreeing with No. C. 46; from Sind. *Collected by Mr. Fedden.*
- C. 52. The fourth right upper milk-molar; from the Punjab. *Collected by Mr. Theobald.*
- C. 53. The third right upper milk-molar; from the Punjab. *Collected by Mr. Theobald.*
- C. 56. The symphysis and the left ramus of the mandible, showing entire molar series and the sockets of a pair of canines¹; from the Punjab. Figured in the *Pal. Ind.* *op. cit.* vol. ii., pl. vi., fig. 3. *Collected by Mr. Theobald.*
- C. 55. Cast of the symphysis of the mandible. The original is from the Siwalik Hills, and is in the British Museum. It is figured in the 'F. A. S.' pl. lxxiv., fig. 4 (as *R. palæindicus*). *Purchased.*
- C. 58. Cast of part of the left ramus of the mandible, showing pm. 4 and the three true molars. The original is from the Siwalik Hills, and is in the British Museum. It is figured in the 'F. A. S.' pl. lxxiv., fig. 3 (as *R. palæindicus*). *Purchased.*
- C. 61. Part of the right ramus of the mandible, with pm. 4 and the three true molars; from the Punjab. The ramus has a depth of 3.9 inches at m. 2, and thereby agrees with No. C. 56. *Collected by Mr. Theobald.*
- C. 250. The symphysis and one ramus of the mandible agreeing with No. C. 56; from Perim Island. *Captain Searle's Collection.*
- C. 251. Part of the mandible of a young individual, provisionally referred to the present species; from Perim Island. *Captain Searle's Collection.*
- C. 45. Part of the mandible of a young individual, provisionally referred to this species; from Sind. *Collected by Mr. Fedden.*

¹ For the question as to the reference of the mandibles of the different species of Siwalik rhinoceroses, see 'Pal. Ind.' ser. 10, vol. ii., pp. 36-39.

- C. 57. A lower canine ; from the Punjab. *Collected by Mr. Theobald.*

Var. *intermedius*, Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 5 (1884).

- C. 34. The second left upper true molar ; from Sind. Figured in the
Fig. 'Pal. Ind.' *op. cit.* vol. ii., pl. v., fig. 2 ; and vol. iii., pl. i.,
fig. 3. *Collected by Mr. Fedden.*

- C. 265. Fragment of the left maxilla with the damaged m. 1 and
m. 2 ; from Gandoi, Búgú Hills.

Collected by Mr. Blanford, 1882.

Var. *gajensis*, Lyd.

'Pal. Ind.' ser. 10, vol. ii., p. 40 (1881).

- C. 36. The hinder part of the cranium, and the first right upper
Fig. true molar ; from the Gáj group of Sind. Figured in the
'Pal. Ind.' *op. cit.* vol. ii., pl. vii., fig. 1, pl. v., fig. 7 ; and
vol. iii., pl. i., fig. 4. *Collected by Mr. Fedden.*

Rhinoceros palæindicus, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 8, pl. lxxiii. (1847).

- C. 59. Cast of the cranium of a young individual with the milk-
dentition. The original is from the Siwalik Hills, and is
in the British Museum. It is figured in the 'F. A. S.'
pl. lxxiv., fig. 1 ; the right dentition is figured (from a cast)
in the 'Pal. Ind.' ser. 10, vol. ii., pl. vii., fig. 3. Another
specimen of the right upper milk-molars (in which mm. 3
has a distinct crochet) is figured in the 'Trans. R. Dublin
Soc.' ser. 2, vol. iii., pl. iii., fig. 1. *A. S. B. Collection.*

- C. 25. Two little-worn upper premolars, provisionally referred to
this species ; from the Punjab. *Collected by Mr. Theobald.*

- C. 25a. A fourth right upper premolar, provisionally referred to this
Fig. species ; from the Punjab. Figured in the 'Pal. Ind.'
op. cit. vol. ii., pl. vii., fig. 2, (quoted as C. 26).

Collected by Mr. Theobald.

- C. 49. Cast of the second right upper true molar. The original is
from the Siwalik Hills, and is in the British Museum
(No. 39648). It is figured in the 'F. A. S.' pl. lxxv., fig. 4
(as a premolar), and in the 'Pal. Ind.' *op. cit.* vol. i., pl.
iv., fig. 3, and vol. iii., p. 4. A less worn specimen is
figured in the 'Trans. R. Dublin Soc.' *op. cit.* fig. 3.

Purchased.

- C. 65. Cast of the symphysis and part of the right ramus of the mandible, showing the first three premolars, mm. 4, m. 1, the canines and incisors. The original is from the Siwalik Hills, and is in the British Museum. It is figured in the 'F. A. S.' pl. lxxv., fig. 10 (as *R. platyrhinus*).
Purchased.
- C. 66. Symphysis of a mandible, agreeing with the last in the number and size of the cutting-teeth, but slightly different in form; from the Siwalik Hills.
No history.
- C. 44. Part of the right ramus of a mandible, provisionally referred to this species; from Pádri. The ramus is deeper than is *R. sivalensis* (No. C. 56); the depth at m. 2 being 4.6 inches.
Collected by Mr. Theobald.
- C. 67. A lower canine; from the Siwalik Hills. *A. S. B. Collection.*
- C. 68. A lower incisor; from Lehri. *Collected by Mr. Theobald.*

***Rhinoceros platyrhinus*, Falc. and Caut.**

'Fauna Antiqua Sivalensis,' pt. 8, pl. lxxii. (1847).

- C. 64. Cast of the cranium. The original is from the Siwalik Hills, and is in the British Museum. It is figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. ix., fig. 2, the right dentition being figured (from a cast) in pl. viii. A detached upper true molar of the same species is figured in the 'Trans. R. Dublin Soc.' ser. 2, vol. iii., pl. iii., fig. 2.
A. S. B. Collection.
- C. 69. Cast of the third right upper true molar. The original is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pl. lxxv., fig. 12. *Purchased.*
- C. 70. The hinder half of the third right upper true molar; from the Siwalik Hills.
A. S. B. Collection.
- C. 47. Cast of a fragment of the left maxilla of a young individual, provisionally assigned to this species, and showing mm. 2 and mm. 3. The original is from the Siwalik Hills, and is in the British Museum. The cast is figured in the 'Pal. Ind.' *op. cit.* vol. ii., pl. vii., fig. 4. *Purchased.*
- C. 71. Third right upper milk-molar, provisionally assigned to this species; from the Siwalik Hills.
A. S. B. Collection (No. S. 854).

- C. 72. Second right upper milk-molar, provisionally referred to this species; from the Siwalik Hills. Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. vi., fig. 10, and noticed in vol. ii., p. 53. *A. S. B. Collection.*

Genus ACERATHERIUM, Kaup.

'Isis,' 1832, p. 904.

Aceratherium perimense, Falc. and Caut.

Syn. *Rhinoceros* (A.?) *perimensis*, Falc. and Caut. *R. planidens*, and *R. iravadicus*, Lyd.

'Fauna Antiqua Sivalensis,' pt. 8, pl. lxxv. (1847).

- C. 1. Cranium; from near Niki, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. i. *Collected by Mr. Theobald.*

- C. 73. Two fragments of the occiput; from Burma. Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. v., fig. 3 (as *R. iravadicus*). *Collected by Mr. Blanford.*

- C. 2. Part of the left maxilla, showing all the cheek-teeth except Fig. m. 3; from near Jabi, Punjab. Figured in the 'Pal. Ind.' *op. cit.* vol. ii., pl. ii. *Collected by Mr. Theobald.*

- C. 3. Four imperfect associated right upper true molars; from Niki, Punjab. One specimen (m. 3) figured in the 'Pal. Ind.' *op. cit.* pl. iii., fig. 5. *Collected by Mr. Theobald.*

- C. 9. Two specimens of pm. 4; from Niki. The less worn specimen probably belonged to the same individual as No. C. 3. *Collected by Mr. Theobald.*

- C. 10. Fragment of the left maxilla, containing pm. 3 and pm. 4; Fig. from Perim Island. Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. vi., fig. 5, and noticed in vol. ii., p. 15. *A. S. B. Collection (No. P. 30).*

- C. 12. Three imperfect upper premolars; from Sind. One is figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. vi., fig. 6. *Collected by Mr. Fedden.*

- C. 237. An early upper premolar; from the Punjab. *Collected by Mr. Theobald.*

- C. 7. Three specimens of upper first or second true molars; from the Punjab. One is figured in the 'Pal. Ind.' *op. cit.* vol. ii., pl. iii., fig. 3. *Collected by Mr. Theobald.*

- C. 8. Three specimens of first and second upper true molars ; from the Punjab. *Collected by Mr. Theobald.*
- C. 11. Three upper molars ; from the Punjab. *Collected by Mr. Theobald.*
- C. 6. Two specimens of the third upper true molar ; from the Punjab. *Collected by Mr. Theobald.*
- C. 13. Two imperfect first or second upper true molars ; from Padri.
Fig. Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. iv., figs. 7, 9 ; and described in text under the name of *Rhinoceros planidens*. *Collected by Mr. Theobald.*
- C. 74. A first or second left upper true molar ; from Burma. *Fig.* Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. v., fig. 1 (under the name of *R. iravadicus*), and vol. iii., pl. i., fig. 5. *No history.*
- C. 75. A first or second right upper true molar ; found in a Pagoda in Burma. *Fig.* Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. v., fig. 2. *Presented by Sir A. Phayre, K.C.S.I.*
- C. 18. Fragment of the left maxilla of a young individual, containing mm. 2 and mm. 3 ; from Asnot, Punjab. *Fig.* Figured in the 'Pal. Ind.' *op. cit.* vol. ii., pl. iii., fig. 2. *Collected by Mr. Theobald.*
- C. 76. Fragment of the right maxilla of a young individual, with *Fig.* mm. 2 and mm. 3 ; from Burma. Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. v., fig. 4, under the name of *R. iravadicus*, and referred to the present species in vol. ii., p. 23. *No history.*
- C. 14. Two specimens of the upper incisor ; from Asnot. One specimen is much worn ; the other is unworn, and figured in the 'Pal. Ind.' *op. cit.* vol. ii., pl. iii., fig. 4. *Collected by Mr. Theobald.*
- C. 4. C. 5. Two portions of the mandible, apparently belonging to the same individual as No. C. 3 ; from Niki. *Fig.* *Collected by Mr. Theobald.*
- C. 15. Fragment of the right ramus of the mandible, with m. 3 and part of m. 2 ; from Jabi. *Collected by Mr. Theobald.*
- C. 17. Fragment of the left ramus of the mandible, with one milk (?) molar ; from Perim Island. *A. S. B. Collection.*

- C. 62. Part of the left ramus of the mandible, with two broken molars of huge size; from the Punjab. The ramus measures more than 5.5 inches in depth, in which respect it agrees with No. C. 4. *Collected by Mr. Theobald.*
- C. 63. Part of the right ramus of the mandible, with $\overline{\text{pm. 3}}$, $\overline{\text{pm. 4}}$, and $\overline{\text{m. 1}}$; from the Punjab. *Collected by Mr. Theobald.*
- O. 130. Part of the right ramus of a mandible with $\overline{\text{m. 3}}$, provisionally assigned to the present species; from Perim Island. *A. S. B. Collection.*
- C. 238. Part of the left ramus of the mandible of an immature individual, showing $\overline{\text{m. 1}}$ in alveolo; from the Punjab. *Fig.* Figured in the 'Pal. Ind.' ser. 10, vol. ii., pl. iii., fig. 1. *Collected by Mr. Theobald.*
- O. 249. Mandible provisionally referred to this species; from Perim Island. *Captain Searle's Collection.*
- O. 19. The angle of a mandible, provisionally referred to this species; from Jañori. *Collected by Mr. Theobald.*
- C. 16. A lower molar; from Niki. *Collected by Mr. Theobald.*
- O. 16a. A lower molar; from the Siwalik Hills. *A. S. B. Collection.*
- The following specimens are provisionally referred to this species on account of their large size; they were obtained from Perim Island and were presented by Captain Searle in 1882:—*
- C. 252. The tibia.
- C. 253. The femur.
- C. 254. Part of the innominate.
- C. 255. The sacrum.

Aceratherium blanfordi, Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 2 (1884).

var. *major*, Lyd. (*op. cit.*)

- O. 268. Left maxilla, with three true molars; from Dera Búgti. *Fig.* Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. i., fig. 1. This and the following specimens are the types. *Collected by Mr. Blanford, 1882.*
- C. 259. Second left upper true molar; from Gandoi, Búgti Hills. *Fig.* Figured in the 'Pal. Ind.' *op. cit.* pl. i., fig. 2. *Collected by Mr. Blanford, 1882.*

- C. 262. Much-worn second right upper true molar; from Gandoi.
Fig. Figured in the 'Pal. Ind.' *op. cit.* pl. ii., fig. 2.
Collected by Mr. Blanford, 1882.
- O. 271. Part of right ramus of the mandible; from Gandoi. Figured
Fig. in the 'Pal. Ind.' ser. 10, vol. iii., p. 6, woodcut, fig. 2.
Collected by Mr. Blanford, 1882.
- C. 272. Mandible without teeth; from Gandoi.
Collected by Mr. Blanford, 1882.
- C. 260. First and second right upper milk-molars; from Gandoi.
Fig. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. i., fig. 6.
Collected by Mr. Blanford, 1882.
- C. 258. A right upper milk-molar (?); from Gandoi. Figured in the
Fig. 'Pal. Ind.' *op. cit.* vol. iii., pl. ii., fig. 1.
Collected by Mr. Blanford, 1882.
- C. 267. Part of right ramus of the mandible, with one milk-molar;
Fig. from Dera Búgti. Figured in the 'Pal. Ind.' *op. cit.*
 vol. iii., pl. ii., fig. 3. *Collected by Mr. Blanford, 1882.*
- C. 50. Fragment of the left maxilla, showing pm. 4, m. 1, and m. 2
Fig. from the Punjab. Figured in the 'Pal. Ind.' *op. cit.* vol. ii.,
 pl. vi., fig. 1 (as (P) *R. palæindicus*), and noticed in vol. iii.,
 p. 2. *Collected by Mr. Theobald.*
- C. 42. A third right upper true molar, probably belonging to this
 species; from the Punjab. *Collected by Mr. Theobald.*
- var. *minor*, Lyd. (*op. cit.*)
- C. 269. Left maxilla with all the cheek-teeth; from Gandoi. Figured
Fig. in the 'Pal. Ind.' *op. cit.* pl. ii., fig. 4.
Collected by Mr. Blanford, 1882.
- C. 266. Fragment of right maxilla, containing the three true molars,
 much obscured by matrix; from Gandoi.
Collected by Mr. Blanford, 1882.
- C. 270. Part of left ramus of mandible, associated with C. 269.
Fig. Figured in the 'Pal. Ind.' *op. cit.* pl. ii., fig. 5.
Collected by Mr. Blanford, 1882.

Aceratherium (?) sp.

- C. 60. Cast of a cranium, with milk and permanent cheek-dentition
 in a broken condition. The original is from the Siwalik
 Hills, and is in the British Museum (No. 48932). It
 is noticed in the 'Pal. Ind.' ser. 10, vol. iii., p. 4.
Purchased.

Specifically undetermined specimens belonging to Rhinoceros or Aceratherium.

- C. 93. Fragment of the left ramus of the mandible, with one molar ;
from the Punjab. *Collected by Mr. Theobald.*
- C. 94. Fragment of the left ramus of the mandible, with two milk-
(P) molars ; from the Punjab. *Collected by Mr. Theobald.*
- C. 95. Fragment of the right ramus of the mandible, with two molars ;
from the Punjab. *Collected by Mr. Theobald.*
- C. 96. Fragment of the right ramus of the mandible, with two molars ;
from the Punjab. *Collected by Mr. Theobald.*
- C. 97. Fragment of the right ramus of the mandible, with two
molars ; from the Punjab. *Collected by Mr. Theobald.*
- C. 98. Fragment of the right ramus of the mandible, with two
Fig. molars ; from the Siwalik Hills. The first tooth is figured
in the 'Pal. Ind.' ser. 10, vol. i., pl. vi., fig. 7.
A. S. B. Collection (Nos. S. 322-323).
- C. 99. Fragment of the right ramus of the mandible ; from the
Siwalik Hills. *A. S. B. Collection.*
- C. 78. Three specimens of first lower premolars ; from Sind.
Collected by Mr. Blanford.
- C. 79-86. Eight right lower molars ; from the Punjab.
Collected by Mr. Theobald.
- C. 87-91. Five left lower molars ; from the Punjab.
Collected by Mr. Theobald.
- C. 92. A right lower molar ; from Khushálgarh, Punjab. Figured in
Fig. the 'Pal. Ind.' ser. 10, vol. i., pl. vi., fig. 3.
Presented by Lieutenants Garnett and Trotter.
- C. 261, C. 263, Several lower molars ; from Gandoi, Búgti Hills.
C. 264. *Collected by Mr. Blanford, 1882.*
- C. 236. A lower canine ; from the Siwalik Hills.
By exchange with the Rúrki Museum.
- C. 102. The glenoidal extremity of the scapula ; from the Punjab.
Collected by Mr. Theobald.
- C. 100. The distal extremity of the humerus ; from Niki, Punjab.
Collected by Mr. Theobald.

- C. 101. Two specimens of the proximal extremity of the humerus ;
from the Siwalik Hills. *A. S. B. Collection.*
- C. 107. Two specimens of the distal extremity of the radius from
Sind. *Collected by Mr. Fedden.*
- C. 108. Proximal extremity of the ulna ; from the Punjab.
Collected by Mr. Theobald.
- C. 125. Three specimens of the cuneiform of the carpus ; from the
Punjab. *Collected by Mr. Theobald.*
- C. 126. The cuneiform of the carpus ; from the Siwalik Hills.
A. S. B. Collection.
- C. 127. The cuneiform of the carpus ; from the Punjab. This bone
is more massive than the preceding.
Collected by Mr. Theobald.
- C. 226. The left cuneiform of the carpus ; from the Punjab.
Collected by Mr. Theobald.
- O. 128. Two specimens of the scaphoid ; from the Siwalik Hills.
A. S. B. Collection.
- C. 227. The magnum ; from the Punjab. *Collected by Mr. Theobald.*
- C. 111. The median right metacarpal, of a long type ; from the
Siwalik Hills. *A. S. B. Collection.*
- C. 112. A similar bone ; from the Punjab.
Collected by Mr. Theobald.
- C. 113. The median left metacarpal, of a shorter type ; from Sind.
Collected by Mr. Fedden.
- C. 114. The inner left metacarpal, probably belonging to the same
species as the last ; from Sind. *A. S. B. Collection.*
- C. 115. The outer left metacarpal of the same species ; from Sind.
Collected by Mr. Fedden.
- C. 116. An outer metacarpal ; from Sind. *Collected by Mr. Fedden.*
- C. 103. Three specimens of the proximal extremity of the femur ;
from the Punjab. *Collected by Mr. Theobald.*
- C. 104. Two specimens of the distal extremity of the femur ; from the
Siwalik Hills. *A. S. B. Collection.*
- C. 105. Two specimens of the patella ; from the Siwalik Hills.
A. S. B. Collection.

- C. 106. Two imperfect specimens of the patella ; from the Punjab.
Collected by Mr. Theobald.
- C. 109. Two specimens of the distal extremity of the tibia ; from the Siwalik Hills.
A. S. B. Collection.
- C. 110. The distal extremity of the tibia ; from Sind.
Collected by Mr. Fedden.
- C. 117. Three specimens of the astragalus ; from the Punjab.
Collected by Mr. Theobald.
- C. 118. The astragalus ; from the Punjab. This specimen is remarkable for its excessive transverse width.
Collected by Mr. Theobald.
- C. 119. Two specimens of the astragalus, of very small size ; from the Punjab.
Collected by Mr. Theobald.
- C. 120. Two very similar specimens ; from the Punjab.
Collected by Mr. Theobald.
- C. 121-122. The bones of the hind-foot of a very small, but adult form ; from Niki. Associated with No. C. 100.
Collected by Mr. Theobald.
- C. 123. The calcaneum ; from the Siwalik Hills. *No history.*
- C. 124. The calcaneum ; from the Siwalik Hills. *A. S. B. Collection.*
- C. 129. The cuboid ; from the Siwalik Hills. *A. S. B. Collection.*
- C. 131. A first lateral phalangeal ; from the Siwalik Hills.
A. S. B. Collection.
- C. 132. Two specimens of first lateral phalangeals ; from the Punjab.
Collected by Mr. Theobald.
- C. 133. Two specimens of first lateral phalangeals ; from Sind.
Collected by Mr. Fedden.
- C. 134. Two specimens of a first median phalangeal ; from Sind.
Collected by Mr. Fedden.
- C. 135. Three specimens of first median phalangeals of a shorter type ; from Sind.
Collected by Mr. Fedden.
- C. 136. A second median phalangeal ; from Sind.
Collected by Mr. Fedden.
- C. 137. A third median phalangeal ; from Sind.
Collected by Mr. Fedden.

- C. 230-234. Sesamoids, from the Punjab and Sind.
Collected by Messrs. Theobald and Fedden.
- C. 248. The axis vertebra; from the Punjab.
Collected by Mr. Theobald.
- C. 239. An early cervical vertebra; from the Punjab.
Collected by Mr. Theobald.
- C. 240. A cervical vertebra; from the Punjab.
Collected by Mr. Theobald.
- C. 241. A cervical vertebra: from the Punjab.
Collected by Mr. Theobald.

Family CHALICOTHERIIDÆ.

Genus CHALICOTHERIUM, Kaup.

'Oss. Foss. de Darmstadt,' pt. 2, p. 4 (1833).

Chalicotherium sivalense, Falc. and Caut.

Syn. *Anoplotherium sivalense*, Falc. and Caut.

'Trans. Geol. Soc.,' ser. 2, vol. v., p. 502 (1840—read, 1837).

- B. 129. Two fragments of the mandible, the first with one and the second with two cheek-teeth; from Sind.
Collected by Mr. Fedden.
- B. 130. A lower molar; from the Punjab.
Collected by Mr. Theobald.
- B. 311. Cast of anterior portion of the cranium. The original, which is the type, is from the Siwalik Hills, and is figured in the 'F. A. S.' pl. lxxx., fig. 1, and in 'Falconer's Palæontological Memoirs,' vol. i., pl. xvii., figs. 3, 4: it is preserved in the Museum of Marischal College, Aberdeen.
A. S. B. Collection.
- B. 312. Cast of the maxillæ. The original is from the Siwalik Hills, and is figured in the 'F. A. S.' *op. cit.* fig. 2, and in the 'Pal. Mem.' *op. cit.* figs. 1, 2; and is in the British Museum.
A. S. B. Collection.
- B. 313. Cast of left ramus of the mandible. The original is from the Siwalik Hills, and is figured in the 'F. A. S.' *op. cit.* fig. 4, and in the 'Pal. Mem.' *op. cit.* figs. 6, 7: it is now in the British Museum.
A. S. B. Collection.

- C. 242. A lower molar ; from Sind. *Collected by Mr. Fedden.*

The family and generic position of the following specimens is uncertain :—

- C. 229. A small carpal bone ; from Jabi, Punjab.
Collected by Mr. Theobald.
- C. 246. The first phalangeal of a perissodactyle, probably allied to *Palæotherium* ; from the Punjab.
Collected by Mr. Theobald.
- C. 247. The head of the femur and part of a metacarpal of a large perissodactyle ; from the nummulitics (Eocene) of the Punjab.
Collected by Mr. Wynne.

Suborder *PROBOSCIDEA*.

Family *ELEPHANTIDÆ*.

Genus *ELEPHAS*, Linn.

'Syst. Nat.,' ed. 12, vol. i., p. 48 (1766).

A. Elephas proper (Euelephas, Falc.).

Elephas hysudricus, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 1, p. 41, pl. i. (1846).

- A. 341. Cast of the cranium. The original is from the Siwalik Hills, and is in the British Museum ; it is figured in the 'F. A. S.' pls. iv., v. *No history.*
- A. 261. A young cranium, showing mm. 3 and mm. 4 ; from Rúpar. The third milk-molar has five ridges remaining ; the second is complete, and has eleven ridges. The greater height and number of the ridges in mm. 4 readily distinguish this specimen from *E. planifrons* (No. A. 259).
Collected by Mr. Theobald.
- A. 271. A very similar specimen, with the corresponding teeth ; from west of Jamu. The last milk-molar is in germ, and has eleven ridges.
Collected by Mr. Theobald.
- A. 251. Part of a fourth upper milk-molar, with six ridges remaining ; from the Siwalik Hills. *A. S. B. Collection (No. S. 60).*
- A. 286. Fragment of a milk-molar ; from the Siwalik Hills.
A. S. B. Collection (No. S. 58).

- A. 292. Part of the palate, showing m. 2 and m. 3; from the Siwalik Hills. The second molar has about twelve ridges remaining. *A. S. B. Collection.*
- A. 293. Fragment of an upper molar, showing eight or nine well-worn ridges, which are more approximated than usual; from the Siwalik Hills. *A. S. B. Collection (No. S. 73).*
- A. 294. The palatal region of the cranium, showing m. 2 and m. 3 of both sides; from the Markanda valley, Siwalik Hills. The second molars are worn and have eight ridges remaining; the third have fifteen ridges. *Presented by Col. Godwin-Austen, 1866.*
- A. 295. The palate with m. 2 and m. 3 of both sides; from the Punjab. The second molars have eight ridges remaining. *Collected by Mr. Theobald.*
- A. 296. Fragment of a late upper true molar; from the Siwalik Hills. *A. S. B. Collection (No. S. 64).*
- A. 297. Greater part of a third upper true molar, with seventeen ridges; from Rúpar. *Collected by Mr. Theobald.*
- A. 280. Fragment of an upper true molar, comprising ten ridges, denuded of cement; from the Siwalik Hills. *A. S. B. Collection.*
- A. 282. Fragment of a late upper true molar; from Hoshiárpúr. *Collected by Mr. Theobald.*
- A. 284. Fragment of an upper true molar, with nine ridges remaining; from Hoshiárpúr. *Collected by Mr. Theobald.*
- A. 285. A very similar specimen; from the Siwalik Hills. *A. S. B. Collection (No. S. 51).*
- A. 287. Another very similar specimen; from the Punjab. *Collected by Mr. Theobald.*
- A. 289. Fragment of an upper true molar; from the Siwalik Hills. *A. S. B. Collection.*
- A. 243. Part of the right maxilla, with eleven ridges of m. 3; from the Kangra district. The tooth is much worn. *Collected by Mr. Theobald.*
- A. 348. Fragment of the right ramus of the mandible of a young individual, with a fragment of mm. 3 and the perfect mm. 4; from the Siwalik Hills. The fourth milk-molar has ten ridges; the cement has to a great extent weathered away. *By exchange with the Rürki Museum.*

- A. 274. Fragment of the left ramus of the mandible, showing portions of $\overline{\text{mm. 4}}$ and $\overline{\text{m. 1}}$; from the Siwalik Hills.
A. S. B. Collection (No. S. 49).
- A. 281. Fragment of the left ramus of the mandible with part of $\overline{\text{m. 1}}$, of which seven ridges remain; from the Siwalik Hills.
A. S. B. Collection (No. S. 51).
- A. 216. The second (?) right lower true molar, with twelve ridges; from Pádri.
Collected by Mr. Theobald.
- A. 275. The left ramus and symphysis of the mandible, showing $\overline{\text{m. 2}}$, with eleven remaining ridges; from the Potwár district.
Collected by Mr. Theobald.
- A. 277. Part of the left ramus of the mandible with portions of $\overline{\text{m. 2}}$ and $\overline{\text{m. 3}}$; from Pinjor. Seven ridges remain in $\overline{\text{m. 2}}$; they are placed unusually far apart, but descend deep into the crown as in the present species.
Collected by Mr. Theobald.
- A. 229. Part of a very narrow lower true molar, with eight ridges remaining; from Lehri, Punjab. *Collected by Mr. Theobald.*
- A. 221. Part of the right ramus of the mandible, with the third (?) true molar; from the Siwalik Hills. Twelve ridges are visible, which show the plaited enamel and characteristic loop on the masticating surface of the tooth.
A. S. B. Collection (No. S. 37).
- A. 241. Part of the left ramus and symphysis of the mandible, containing the greater part of $\overline{\text{m. 3}}$; from Janori. The tooth has eleven ridges remaining, of which five are worn; the hinder ridges are much bent forward.
Collected by Mr. Theobald.
- A. 262. Part of the left ramus of the mandible, with $\overline{\text{m. 3}}$, in which some seventeen ridges can be counted; from the Siwalik Hills. The tooth is very long and narrow, and the ridges unusually numerous.
A. S. B. Collection.
- A. 317. Part of the right ramus of the mandible, with $\overline{\text{m. 3}}$, showing sixteen ridges and a talon; from the Siwalik Hills. This specimen apparently belongs to the same individual as the last.
A. S. B. Collection.
- A. 263. The left ramus of the mandible, with the much-worn $\overline{\text{m. 3}}$, of which twelve ridges remain; from the Siwalik Hills. The worn enamel disks are narrow, and but little crenulated, with the ridges approximated, all of which characters indicate a very old tooth. *A. S. B. Collection (No. S. 41).*

- A. 267. Part of the left ramus of the mandible, with $\overline{m. 3}$; from the Siwalik Hills.
A. S. B. Collection (No. S. 42).
- A. 270. Part of the right ramus of the mandible, with $\overline{m. 3}$, showing about fourteen ridges; from the Siwalik Hills.
A. S. B. Collection (No. S. 40).
- A. 278. The third left lower true molar, with fifteen ridges; from the Punjab.
Collected by Mr. Theobald.
- A. 288. The greater part of the left ramus of the mandible, containing $\overline{m. 3}$, with fifteen ridges remaining; from Kalka.
Collected by Mr. Theobald.
- A. 290. Part of the left ramus of the mandible, with $\overline{m. 3}$, of which fourteen ridges remain; from the Siwalik Hills.
A. S. B. Collection (No. S. 39).
- A. 320. The nearly complete mandible, with $\overline{m. 3}$ on both sides, containing about sixteen ridges; from Pinjor.
Collected by Mr. Theobald.
- A. 268. Part of the third left lower true molar, with eight ridges remaining; from west of Pinjor. *Collected by Mr. Theobald.*
- A. 269. Another fragment of a corresponding tooth with eleven ridges remaining; from the Kangra district.
Collected by Mr. Theobald.
- A. 283. Part of the mandible, with a fragment of $\overline{m. 3}$; from the Siwalik Hills.
A. S. B. Collection (No. S. 38).
- A. 279. Part of a molar; from the Siwalik Hills.
A. S. B. Collection (No. S. 48).
- A. 291. Fragment of late left lower true molar; from the Punjab.
Collected by Mr. Theobald.

B. Loxodon, Falc.

Elephas planifrons, Falc. and Caut.

'Fauna Antiqua Sivalensis,' pt. 1, pl. ii. (1846).

- A. 415. Cast of the cranium. The original is from the Siwalik Hills, and is in the British Museum; it is figured in pls. x., xi., of the 'F. A. S.'
No history.
- A. 157. Part of the right maxilla of a very young animal provisionally referred to this species, showing $\overline{mm. 3}$ and the alveolus of $\overline{mm. 2}$, as well as that of the tusk; from the Siwalik



er true molar, with
ed by Mr. Theobald.

each with eleven

ed by Mr. Theobald.

with eight ridges re-
ed by Mr. Theobald.

(ale) individual, with
Hills.

Section (No. S. 230).

mandible, showing
is from the Siwa-
it is figured in the
represented in fig.

Purchased.

ble, with portion of
Siwalik Hills. The
ation, and has nine
the Rürki Museum.

showing portions of
Hills. There seem to

Collection (No. S. 43).

le, with the greater
hiárpúr district. Six
ed by Mr. Theobald.

with m. 1 and part of
first molar has seven
Collection (No. S. 21).

the mandible, with
om the Siwalik Hills.

Collection (No. S. 27).

with the greater part
the Siwalik Hills.

A. S. B. Collection.

molar, with eight
ch narrower in front
ed by Mr. Theobald.

- A. 242.** The left ramus of the mandible, with the first or second true molar; from the Siwalik Hills. The tooth has eight ridges.
A. S. B. Collection (No. S. 50).
- A. 222.** The right ramus and symphysis of the mandible, with $\overline{m. 2}$, and $\overline{m. 3}$; from the Siwalik Hills. Five ridges remain of $\overline{m. 2}$, and six are visible in $\overline{m. 3}$.
A. S. B. Collection (No. S. 22).
- A. 228.** Part of a second lower true molar, with eight ridges remaining; from the Khárian Hills near Jhelam, Punjab.
Collected by Mr. Theobald.
- A. 248.** The mandible, with $\overline{m. 2}$ and $\overline{m. 3}$ of both sides; from the Siwalik Hills. The second molar has five remaining ridges, and seven of $\overline{m. 3}$ are visible.
A. S. B. Collection (No. S. 23).
- A. 219.** Cast of the left ramus of the mandible, showing $\overline{m. 3}$ with eleven ridges. The original is from the Siwalik Hills, and is believed to be in the British Museum.
A. S. B. Collection.
- A. 220.** A similar specimen of the right ramus; from Pádri.
Collected by Mr. Theobald.
- A. 224.** Part of the left ramus of the mandible, with $\overline{m. 3}$, which contains eleven ridges and a talon; from Nanowal.
Collected by Mr. Theobald.
- A. 246.** Part of the left ramus of the mandible, with $\overline{m. 3}$, containing ten or eleven ridges; from the Siwalik Hills.
A. S. B. Collection (No. S. 24).
- A. 247.** A ramus of the mandible with $\overline{m. 3}$; from the Potwár district.
Collected by Mr. Theobald.
- A. 265.** The left ramus of the mandible with $\overline{m. 3}$, containing ten or eleven ridges; from Pinjor. *Collected by Mr. Theobald.*
- A. 266.** The right ramus of the mandible with part of $\overline{m. 3}$, of which eight ridges remain; from west of Pinjor.
Collected by Mr. Theobald.
- A. 296.** The left ramus and symphysis of the mandible, showing $\overline{m. 3}$, with about ten ridges; from Khetpuráli.
Collected by Mr. Theobald.
- A. 232.** A little-worn imperfect third lower true molar, with nine ridges remaining; from the Potwár district.
Collected by Mr. Theobald.

- A. 234. Fragment of the right ramus of the mandible, with the last seven ridges of $\overline{m. 3}$; from Nanowal.

Collected by Mr. Theobald.

- A. 235. A very similar specimen to the last; from the Markanda valley. The tooth is more perfect.

Presented by Col. Godwin-Austen, 1866.

- A. 236. Another very similar specimen; from Asnot.

Collected by Mr. Theobald.

- A. 237. A fourth very similar specimen, but with $\overline{m. 3}$, nearly complete, which appears to have had thirteen ridges, from the Markanda valley. Presented by Col. Godwin-Austen, 1866.

- A. 240. Fragment of the right ramus of the mandible, with nine ridges of $\overline{m. 3}$; from the Hoshiárpúr district.

Collected by Mr. Theobald.

- A. 244. Part of the left ramus of the mandible, with a fragment of $\overline{m. 3}$; from the Punjab.

Collected by Mr. Theobald.

- A. 217. Fragment of a late lower true molar, comprising five ridges and a talon; from Pádri.

Collected by Mr. Theobald.

- A. 401. Several imperfect teeth and jaws; from the Punjab.

Collected by Mr. Theobald.

C. Stegodon, Falc.

***Elephas insignis*, Falc. and Caut.**

"Fauna Antiqua Sivalensis," pt. 1, p. 37 (1846).

Syn. *Mastodon elephantoides*, Clift (*in parte*).

(P) *Stegodon orientalis*, Owen.¹

As it appears impossible to distinguish the cheek-teeth of this species from those of the next, they are all ranged under this head.

- A. 184. An imperfect cranium, with $\overline{m. 1}$ and $\overline{m. 2}$; from the Siwalik Hills. The second molar has seven ridges, instead of the usual eight.

A. S. B. Collection (No. S. 4).

- A. 186. An imperfect cranium, with $\overline{m. 2}$; from the Siwalik Hills.

A. S. B. Collection (No. S. 3).

- A. 345. The cranium; from the Siwalik Hills. This specimen makes an approach to *E. ganesa*; the germ of $\overline{m. 3}$ is visible and shows eleven ridges.

A. S. B. Collection (No. S. 2).

¹ In the 'Pal. Ind.' ser. 10, vol. ii., p. 289, and 'Rec. Geol. Surv. Ind.' vol. xvi, pp. 71, 92, this name is inadvertently given as a synonym of *E. bombifrons*.

- A. 346. An imperfect cranium, of typical form; from the Kangra district.
Collected by Mr. Theobald.
- A. 257. An adolescent cranium, with m.m. 4 and m. 1; from the Kangra district. Each tooth has seven ridges.
Collected by Mr. Theobald.
- A. 198. An adolescent cranium, with part of m.m. 4 and the complete m. 1 (having eight ridges); from the Siwalik Hills.
A. S. B. Collection.
- A. 213. The fourth left upper milk-molar; from Asnot, Punjab.
Fig. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlv., fig. 4.
Collected by Mr. Theobald.
- A. 196. The right maxilla, with m. 1 and m. 2; from the Siwalik Hills.
The first molar has seven ridges.
A. S. B. Collection (No. S. 5).
- A. 197. Part of the right maxilla, with m.m. 4 and m. 1, both imperfect; from Pinjor.
Collected by Mr. Theobald.
- A. 188. Fragment of the left maxilla, with one true molar, with nine ridges; from the Siwalik Hills.
A. S. B. Collection (No. S. 31).
- A. 178. Part of the left maxilla, with part of m. 1 and the entire m. 2; from the Hoshiarpur district. The second molar has eight ridges.
Collected by Mr. Theobald.
- A. 179. A very similar specimen to the last, but of the right side and with only a part of m. 2; from Janori.
Collected by Mr. Theobald.
- A. 166. The third left upper true molar, with eleven ridges and a hind talon; from Pinjor.
Collected by Mr. Theobald.
- A. 206. The palate with m. 3, of both sides; from Asnot. The teeth have eleven ridges.
Collected by Mr. Theobald.
- A. 315. The palate with m. 3, of both sides; from Lehri, Punjab. The left tooth has eleven ridges; the right is broken.
Collected by Mr. Theobald.
- A. 156. Fragment of the third right upper true molar, comprising five unworn ridges; from the Siwalik Hills.
A. S. B. Collection (No. S. 11).
- A. 200. Three unworn ridges of a third upper true molar; from Lehri.
Collected by Mr. Wynne.

- A. 201. Fragment of a third upper true molar, comprising six ridges ; from Asnot. *Collected by Mr. Theobald.*
- A. 153. The anterior part of the left ramus of the mandible of a very young individual, containing the third milk-molar ; from the Siwalik Hills. The tooth is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlvi., fig. 2.
A. S. B. Collection (No. S. 8).
- A. 159. Fragment of the left ramus of the mandible of a rather older individual, with the base of $\overline{m.m. 3}$ and germ of $\overline{m.m. 4}$; from Jhilna. The fourth milk-molar has seven ridges, the talon being broken off. *Collected by Mr. Theobald.*
- A. 160. Part of the right ramus of the mandible, of a young individual, with part of $\overline{m.m. 3}$ and the entire $\overline{m.m. 4}$; from Nanowal. The fourth milk-molar¹ is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlvi., fig. 4 : it has seven ridges and talons. *Collected by Mr. Theobald.*
- A. 189. Part of the left ramus of the mandible, with $\overline{m. 1}$ and $\overline{m. 2}$; from the Kangra district. The first tooth is broken ; the second has eight ridges visible. *Collected by Mr. Theobald.*
- A. 191. A very similar specimen to No. A. 189, but of the opposite side, and with both molars broken ; from Asnot. *Collected by Mr. Theobald.*
- A. 193. Part of the right ramus of the mandible, containing $\overline{m. 1}$ and $\overline{m. 2}$; from Jamu. The first tooth is broken ; the second has nine ridges. *Collected by Mr. Theobald.*
- A. 194. A very similar specimen to the last, with both teeth damaged ; from Pádri. *Collected by Mr. Theobald.*
- A. 195. Another very similar specimen ; from the Potwár district. *Collected by Mr. Theobald.*
- A. 199. The complete second left lower true molar, with nine ridges ; from the Kangra district. *Collected by Mr. Theobald.*
- A. 167. Part of the right ramus of the mandible, showing a part of the second (?) true molar ; probably from the Siwalik Hills. *A. S. B. Collection (No. S. 68).*

¹ In the description of the plate, for *true molar* read *milk-molar*.

- A. 163. The right ramus and symphysis of the mandible, with $\overline{m. 2}$ and $\overline{m. 3}$; from Niki, Punjab. The second molar is imperfect; the third has nine ridges visible.

Collected by Mr. Theobald.

- A. 164. Part of the right ramus of the mandible, showing part of $\overline{m. 2}$ and the germ of $\overline{m. 3}$, of which seven ridges are visible; from the Siwalik Hills.

A. S. B. Collection (No. S. 65).

- A. 165. Part of the right ramus of the mandible with $\overline{m. 3}$, which has eleven ridges and a talon; from the Markanda valley, Siwalik Hills. *Presented by Col. Godwin-Austen, 1866.*

- A. 185. Part of the left ramus of the mandible with $\overline{m. 3}$, which has ten ridges and a talon; from Niki.

Collected by Mr. Theobald.

- A. 187. Part of the left ramus of the mandible, containing the greater part of $\overline{m. 3}$, which is of very large size; from the Punjab.

Collected by Mr. Theobald.

- A. 309. Part of the left ramus of the mandible, with $\overline{m. 3}$, of which ten ridges remain; from Pinjor.

Collected by Mr. Theobald.

- A. 310. A very similar fragment of the right ramus; from the Potwár district.

Collected by Mr. Theobald.

- A. 311. Part of the left ramus of the mandible, with portions of $\overline{m. 2}$ and $\overline{m. 3}$; from the Punjab.

Collected by Mr. Theobald.

- A. 314. Part of the left ramus of the mandible, with ten ridges of $\overline{m. 3}$; from Asnot. The tooth is of enormous size, for which reason it may have belonged to *E. ganesa*.

Collected by Mr. Theobald.

- A. 313. Part of the left ramus of the mandible, showing nine ridges of $\overline{m. 3}$; from Janori.

Collected by Mr. Theobald.

- A. 316. The left ramus and symphysis of the mandible with $\overline{m. 3}$; from the Potwár district. The tooth agrees in size with No. A. 314.

Collected by Mr. Theobald.

- A. 190. Part of the third left lower true molar, with eight ridges remaining; from Pinjor.

Collected by Mr. Theobald.

- A. 192. Fragment of the third left lower true molar with seven ridges remaining; from the Punjab.

Collected by Mr. Theobald.

- A. 203. Fragment of the third left lower true molar of very large size; from the Potwár district. *Collected by Mr. Theobald.*
- A. 204. A very similar fragment of the corresponding tooth of the opposite side; from the same locality.
Collected by Mr. Theobald.
- A. 260. Part of the right ramus of a mandible, with part of $\overline{m. 3}$ referred by Falconer to a dwarf race of this species; from the Siwalik Hills. *A. S. B. Collection (No. S. 67).*

Elephas ganesa, Falc. and Caut.

- "Fauna Antiqua Sivalensis," pt. 1., p. 45 (1846).
- A. 343. The cranium, wanting the tusks, and showing the unworn third true molars; from the Hoshiárpúr district. This specimen is noticed in the Records, vol. ix., pp. 42-8.
Collected by Mr. Theobald, 1874.
- A. 344. Cast of the cranium and tusks. The original is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pls. xxi-xxiii. Considerable restoration has been effected in this specimen. *Probably purchased.*
- A. 297. Part of a tusk; from Lehri. The reference of this and the following specimens is somewhat provisional.
Collected by Mr. Theobald.
- A. 298. Fragment of a tusk; from the Siwalik Hills.
A. S. B. Collection.
- A. 299. Greater part of a tusk, in six pieces; from the Punjab.
Collected by Mr. Theobald.
- A. 304. Two fragments from the middle of a tusk; from the Punjab.
Collected by Mr. Theobald.
- A. 305. Two fragments of the base of a tusk, cut into sections; from the Siwalik Hills.
A. S. B. Collection.
- A. 306. Extremity of a tusk, in three pieces; from the Punjab.
Collected by Mr. Theobald.
- A. 307. The worn extremity of a tusk; from the Punjab.
Collected by Mr. Theobald.

Elephas bombifrons, Falc. and Caut,

- "Fauna Antiqua Sivalensis," pt. i., p. 46 (1846).
- A. 339. Imperfect cranium, wanting the left half; from the Kangra district. The last true molars are in use, and each shows

eight ridges. Noticed in the 'Pal. Ind.' ser. 10, vol. i., p. 267.
Collected by Mr. Theobald.

- A. 414. Cast of the cranium. The original is from the Siwalik Hills, and is in the British Museum; it is figured in the 'F. A. S.' pls. xxvii-viii.
No history.

- A. 214. Part of the left maxilla, containing part of m.m. 4 and the complete m. 1; from the Potwár district, Punjab. The true molar is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlv., fig. 1; it has six ridges, the hinder ones being curved.
Collected by Mr. Theobald.

- A. 142. Fragment of a first right upper true molar, provisionally referred to this species; probably from the Siwalik Hills. There are five ridges remaining, the centre of each of which is the highest point; there are seven or eight cusps on each ridge, and a large quantity of cement in the valleys. The specimen was referred by Falconer to *E. clifti*.
A. S. B. Collection (No. A. 14).

- A. 180. Part of a right maxilla with the worn m.m. 4 and the complete m. 1, which may perhaps belong to this species; from Nanowal. There are six ridges in m. 1 which appear somewhat higher than in typical specimens.
Collected by Mr. Theobald.

- A. 312. The palate, showing m. 2 on either side; from Nanowal. Each tooth has seven ridges.
Collected by Mr. Theobald.

- A. 205. The palate, showing the worn m. 2, and the first ridges of m. 3; from the Siwalik Hills. The second molar has apparently seven ridges, which are low and curved.
A. S. B. Collection.

- A. 174. The second right upper true molar, probably belonging to this species; from the Punjab. There are six remaining ridges, one of which is curved.
Collected by Mr. Theobald.

- A. 176. A second left upper true molar, provisionally referred to this species; from the Siwalik Hills. There are seven ridges; the specimen is referred by Falconer to *E. insignis*.
A. S. B. Collection (No. S. 6).

- A. 162. A third upper true molar; from the Punjab. There are eight ridges in an unworn condition.
Collected by Mr. Theobald.

- A. 202. The palate with m. 2 and m. 3; from the Hoshiárpúr district. The second molar has seven, and the third nine ridges.

Collected by Mr. Theobald.

- A. 181. Fragment of a third upper true molar, with five ridges remaining; from Asnot, Punjab.

Collected by Mr. Theobald.

- A. 183. Part of the third left upper true molar, with seven ridges and a talon remaining; from Niki, Punjab.

Collected by Mr. Theobald.

- A. 211. Fragment of a well-worn upper true molar, with six ridges remaining; from Nanowal.

Collected by Mr. Theobald.

- A. 208. The third left lower milk-molar; from Asnot. Figured in *Fig.* the 'Pal. Ind.' ser. 10, vol. i., pl. xlvi., fig. 3.

Collected by Mr. Theobald.

- A. 334. The fourth right lower milk-molar; from the Deraját. *Fig.* Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlv., fig. 3.

There are five ridges and a talon, in which respect the tooth agrees with the one figured in the 'F. A. S.' pl. xxix. B., fig. 5.

By exchange with the Lahore Museum.

- A. 169. Part of the left ramus of a mandible, provisionally referred to this species, with m.m. 4; from the Punjab. The tooth has six ridges, and agrees with the one figured in the 'F. A. S.' pl. xxix. A., fig. 1.

Collected by Mr. Theobald.

- A. 173. Part of the left ramus of a mandible, probably belonging to this species, with m.m. 4 and m. 1; from the Punjab. The former tooth is worn and apparently had five or six ridges; it is somewhat smaller than m.m. 4 in No. A. 169.

Collected by Mr. Theobald.

- A. 210. An imperfect first right lower true molar, not improbably belonging to this species; from Pádri. It has apparently only six ridges, but is otherwise like *E. insignis*.

Collected by Mr. Theobald.

- A. 168. The nearly complete left ramus of the mandible, showing parts of the three true molars; from the Potwár district, Punjab. The first molar is nearly worn away; m. 2 has seven ridges and fore-and-aft talons, and agrees with m. 2 in No. A. 312: the ridges are low.

Collected by Mr. Theobald.

- A. 161. Part of the left ramus of the mandible, with m. 3, of which there are eight ridges and a talon remaining; from the Potwár district. *Collected by Mr. Theobald.*
- A. 207. The third left lower true molar, with six ridges and a talon remaining; from Niki. *Collected by Mr. Theobald.*
- A. 182. Part of the third left lower true molar, with seven ridges remaining; from the Potwár district. *Collected by Mr. Theobald.*
- A. 175. Part of a left lower true molar with portions of seven ridges remaining, perhaps belonging to this species; from the Potwár district. *Collected by Mr. Theobald.*

Elephas clifti, Falc. and Caut.

"Fauna Antiqua Sivalensis," pt. i., p. 47 (1846).

Syn. ? *Stegodon sinensis*, Owen. *Mastodon elephantoides*, Clift (*in parte*).

- A. 212. Cast of the third right upper milk-molar of a stegodont elephant, provisionally referred to the present species. The original was obtained from beds of probably pliocene age near Shanghai, China, and is preserved in the British Museum. It is the type of *Stegodon sinensis*, and is figured under that name by Owen in the Quart. Journ. Geol. Soc., vol. xxvi., pl. xxvii.; it is also figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlv., fig. 2. *Purchased.*
- A. 209. The fourth left upper milk-molar; from Padri, Punjab. *Fig.* Figured in the 'Pal. Ind.' *op. cit.* pl. xlv., fig. 1. *Collected by Mr. Theobald.*
- A. 137. Cast of the first left upper true molar. The original, which is the type of the species, was obtained from Burma, and is figured by Clift in the 'Trans. Geol. Soc.' ser. 2, vol. ii., pl. xxxix., fig. 6, under the name of *Mastodon elephantoides*; and is also figured in the 'F. A. S.' pl. xxx., fig. 2. The ridges are less closely approximated than in the last specimen; but it is highly probable that this difference is not of more than individual value. *A. S. B. Collection.*
- A. 139. The first right upper true molar, agreeing exactly with the last specimen; from Niadarpúr. *Collected by Mr. Theobald.*
- A. 177. Part of the right maxilla, with part of m. 1 and the complete m. 2; from the Kangra district. The perfect tooth is well

worn and has six broad ridges, and a small front talon : these ridges are worn higher on the outer than on the inner side, which distinguishes this species from all other species of *Elephas*. *Collected by Mr. Theobald.*

- A. 140. The third (?) right upper true molar; from Burma. Four ridges remain. *No history.*

- A. 145. The third upper true molar; from Burma. There is no trace of a median longitudinal cleft; the two first ridges are worn into a common dentine surface. *No history.*

- A. 146. A similar tooth to the last, but less worn and with a smaller hind talon; from Burma. *No history.*

- A. 151. Part of the third left upper true molar, with five ridges exposed; probably from the Siwalik Hills. The cement is abundant, and the enamel crenulated.

A. S. B. Collection (No. A. 12).

- A. 153. Hinder part of a late right upper true molar; perhaps from Burma. *A. S. B. Collection (No. A. 9).*

- A. 141. Fragment of a molar, with two ridges remaining; from Burma. *No history.*

- A. 143. Fragment of a late upper true molar, with three ridges remaining; perhaps from Burma.

A. S. B. Collection (No. A. 10).

- A. 172. A third left upper true molar, provisionally referred to this species; from the Punjab. There are seven ridges and a talon, the outer side of each ridge being higher than the inner.

Collected by Mr. Theobald.

- A. 149. Greater part of the right ramus of the mandible showing the complete third true molar; from the Potwâr district, Punjab. This specimen is provisionally referred to the present species. It has seven ridges and a talon; there is an indistinct median longitudinal cleft in each ridge, and the enamel is less crenulated than in some specimens; there are four or five mammillæ on each ridge. The tooth resembles the one figured in 'F. A. S.' pl. xxx., fig. 5, but has one ridge less.

Collected by Mr. Theobald.

- A. 150. Part of the left ramus of the mandible, with the greater part of m. 3, in a much worn condition; probably from Burma. There is no median cleft, and cement is abundant.

A. S. B. Collection (No. A. 16).

- A. 152. Fragment of the right ramus of the mandible, containing the hinder part of m. 3; from Madanpūr. Five ridges and a talon remain. *Collected by Mr. Theobald.*
- A. 147. A much worn fragment of the third left lower true molar; probably from Burma. Five ridges and a talon remain. *A. S. B. Collection.*
- A. 155. Part of a third lower true molar, with apparently seven ridges; from Burma. *No history.*
- A. 170. Part of the right ramus of the mandible, with the third true molar; from the Siwalik Hills. There are seven ridges remaining, the enamel is crenulated, and there is a cingulum on the outer side. *A. S. B. Collection (No. S. 642).*
- A. 171. Fragment of the left ramus of the mandible, containing a tooth very similar to the last; from Nanowal. *Collected by Mr. Theobald.*
- A. 154. A third lower true molar, with six broken ridges, probably belonging either to this species or *Mastodon latidens*; from Burma. The ridges are curved and have a median cleft: there is but little cement. *No history.*
- A. 402. Molars and jaws not specifically determined; from the Punjab. *Collected by Mr. Theobald.*

Genus **MASTODON**¹, Cuvier.

'Ann. d. Muséum' vol. viii., p. 270 (1806).

A. Tetralophodont group.

Mastodon sivalensis, Falc. and Caut.

"Fauna Antiqua Sivalensis," pt. i., p. 49 (1846).

- A. 103. Cast of the nearly complete cranium. The original is from the Siwalik Hills, and is now in the British Museum; it is figured in pls. xxxii. and xxxiii. of the 'F. A. S.' *Purchased.*
- A. 129. Part of left maxilla showing the complete fourth milk-molar, *Fig.* the alveolus of m.m. 3, and the first three ridges of m. 1; from the Siwalik Hills. The fourth milk-molar is figured

¹ It may be well to observe that the specific determinations of the specimens represented in the following figures of ser. 10, vol. i. of the 'Palæontologia Indica' have been changed: *viz.*

Pl. xxxii. figs. 2 and 3, pl. xxxiii. fig. 2 = *Mastodon* sp.

Pl. xxxii. fig. 4 = *Mastodon pandionis*.

Pl. xli. fig. 4 = *Mastodon sivalensis*.

in the 'Pal. Ind.' ser. 10, vol. i., pl. xli., fig. 2. The enamel is vertically grooved.

A. S. B. Collection (No. S. 1).

- A. 109.** Part of the palate, with the fourth milk-molar and first true molar; from the Siwalik Hills. The teeth agree exactly with those of the last specimen.

A. S. B. Collection (No. S. 13).

- A. 122.** Fragment of 4th (P) right upper milk-molar; from Asnot, Punjab.

Collected by Mr. Theobald.

- A. 124.** Part of fourth (P) left upper milk-molar; from the Potwâr district, Punjab.

Collected by Mr. Theobald.

- A. 123.** Hinder part of first right upper true molar, with three ridges remaining; from Asnot.

Collected by Mr. Theobald.

- A. 102.** Cast of palate and part of cranium. The original is from the Siwalik Hills, and is figured in the 'F. A. S.' pl. xxxiv., fig. 1: it shows the second and third true molars, the latter being unworn. The alternate arrangement of the columns of the teeth is not so strongly marked as in some other specimens.

A. S. B. Collection.

- A. 55.** The second right upper true molar in a half-worn condition; *Fig.* from Asnot. This specimen is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xli., fig. 4, under the name of *M. perimensis*¹ but is referred to the present species in vol. iii., p. 151. It agrees very closely in general characters with the last milk-molar of the opposite side represented in figure 2 of the same plate; and in its posterior half exhibits very clearly the alternate arrangement of the columns. The worn dentine disks are irregular, and have not the trefoil shape of *M. perimensis* ('Pal. Ind.' ser. 10, vol. i., pl. xlii.).

Collected by Mr. Theobald.

- A. 353.** The second left upper true molar; from Lehri, Punjab.

Collected by Mr. Theobald, 1880.

- A. 114.** Cast of the third left upper true molar. The original is from the Siwalik Hills, and is figured in pl. xxxvi., fig. 6, of the 'F. A. S.' It is a typical specimen, with six ridges and a hind talon, and exhibits very markedly the alternate arrangement of the columns.

A. S. B. Collection.

¹ This specimen was referred to *M. perimensis* from its resemblance to a tooth so named by Falconer, but of which the reference appears doubtful. The second upper true molar of that species is represented in the 'Pal. Ind.' ser. 10, vol. iii., pl. xvi., fig. 2.

- A. 106.** The palate, containing the hinder part of the second and the complete third true molar of either side; from Lehri, Punjab. The third left molar is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlv., fig. 1. It agrees very closely with the corresponding tooth of No. A. 102, the alternate arrangement of the columns being very much less marked than in No. A. 114. *Collected by Mr. Theobald.*
- Fig.*
- A. 135.** The first four ridges of the third right upper true molar; from Parmandel. The tooth is unworn, and the columns are alternately arranged. *Collected by Mr. Theobald.*
- A. 116.** Greater part of third left upper true molar, showing an anterior talon and five ridges; from the Potwár district. The alternate arrangement of the columns is well marked. *Collected by Mr. Theobald.*
- Fig.*
- A. 118.** Hinder part of third (?) left upper true molar, with portions of three ridges and a talon remaining; from Asnot. *Collected by Mr. Theobald.*
- A. 119.** Fragment of a molar probably belonging to this species; probably from the Siwalik Hills. *A. S. B. Collection (No. S. 69).*
- A. 258.** Part of a molar cut and polished; from the Punjab. This specimen is noticed in the 'Records' vol. xv., pp. 103-4; it exhibits great crenulation of the enamel, which appears to occur only at the base of the crown in the true molars of this species. *Collected by Mr. Theobald.*
- A. 126.** Fourth right lower milk-molar; from the Kangra district. *Fig.* Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlv., fig. 2. There are four ridges, and the enamel is vertically grooved. *Collected by Mr. Theobald.*
- A. 105.** Fragment of right ramus of mandible, with the second true molar; from the Punjab. The tooth has five ridges and a talon. *Collected by Mr. Theobald.*
- A. 131.** The second (?) left lower true molar with four or five ridges and a talon; from Rúpar. *Collected by Mr. Theobald.*
- A. 107.** Part of a left lower molar, with three ridges remaining; from the Hoshiárpúr district. *Collected by Mr. Theobald.*
- A. 108.** Fragment of a molar, with three ridges and a talon remaining; from Asnot. *Collected by Mr. Theobald.*
- A. 132.** Fragment of a lower molar, with three ridges remaining; from Asnot. *Collected by Mr. Theobald.*

- A. 120.** Cast of a fragment of right ramus of the mandible containing the third true molar. The original is from the Siwalik Hills, and is figured (reversed) in the 'F. A. S.' pl. xxxvii., fig. 8. It is in an early condition of wear, and shows six ridges and a talon; the alternate arrangement of the column is very well marked. *A. S. B. Collection.*
- A. 104.** Symphysial portion of the mandible, containing the third true molar of either side; from near Bhimbar (N. W. of Jamu). The tooth of the right side is figured¹ in the 'Pal. Ind.' ser. 10, vol. i., pl. xlv., fig. 3; it is very like a specimen figured in the 'F. A. S.' pl. xx-xvii., fig. 7, but the ridges are one less in number, and the alternate arrangement of the columns is not so strongly marked; the enamel is quite smooth. The left side of the specimen is crushed in, and the tooth bent inwards.
Collected by Mr. Theobald.
- A. 110.** Part of right ramus of the mandible, with the third true molar; from Niki, Punjab. The tooth is much worn, and contains five ridges and a talon. *Collected by Mr. Theobald.*
- A. 111-112.** Two specimens similar to the last; from the Punjab.
Collected by Mr. Theobald.
- A. 113.** Fragment of left ramus of the mandible, containing the third true molar; from the Potwár district, Punjab. The tooth agrees exactly with that of No. A. 104.
Collected by Mr. Theobald.
- A. 115.** Fragment of the third (?) left lower true molar, with four well-worn ridges remaining; from Asnot.
Collected by Mr. Theobald.
- A. 117.** Hinder part of a third (?) lower true molar; from Asnot. Remarkable for the great number of accessory columns.
Collected by Mr. Theobald.
- A. 121.** Fragment of third left lower true molar; from the Potwár district.
Collected by Mr. Theobald.
- A. 130.** The third (?) left lower true molar; with five ridges, from Lehri.
Collected by Mr. Theobald.
- A. 133.** Part of a third (?) lower true molar; with four ridges remaining; from Niki.
Collected by Mr. Theobald.
- A. 134.** A similar specimen; from Niki. *Collected by Mr. Theobald.*

¹ In the description of the plate the word *palate* is given in place of *mandible*.

Undetermined.

- A. 127. Part of a lower molar, with three ridges, which may or not be imperfect in front; from Lehri. If complete this tooth belongs to a *Trilophodon*; if not it may belong to *M. sivalensis*.
Collected by Mr. Theobald.
- A. 57. The greater part of an intermediate upper true molar, with three ridges and a talon remaining; from Perim Island. This tooth is referred by Falconer to *M. perimensis*, and is so described in the 'Pal. Ind.' ser. 10, vol. i, it presents, however, a considerable resemblance to *M. sivalensis*, and requires careful comparison: it is figured in the 'Pal. Mem.' vol. i., pl. ix., fig. 4. *A. S. B. Collection (No. P. 4).*

Mastodon latidens, Clift.

'Trans. Geol. Soc.,' ser. 2, vol. ii., p. 371 (1828).

- A. 125. A small tooth regarded as the second left upper milk-molar; from the Potwár district of the Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxxvii., fig. 5.
Collected by Mr. Theobald.
- A. 333. A very similar tooth, with the second ridge broken; from Sind.
Collected by Mr. Blanford.
- A. 65. The third right upper milk-molar; from Asnot, Punjab. Figured in the 'Pal. Ind.' *op. cit.* pl. xxxvii., fig. 4.
Collected by Mr. Theobald.
- A. 64. The fourth left upper milk-molar and premolar; from Asnot. Fig. The premolar was found in its alveolus below mm. 4. Figured in the 'Pal. Ind.' *op. cit.* pl. xxxvii., figs. 6 and 8.
Collected by Mr. Theobald.
- A. 82. The palate, showing the second and the first ridge of the third true molar, on both sides; from Burma. The second molar of the right side is figured in the 'Pal. Ind.' *op. cit.* pl. xxxviii., fig. 2.
A. S. B. Collection.
- A. 87. A fine specimen of the palate, containing the second true molar of both sides, and the left third molar; from the Punjab. The last molar is just coming into use; it has five ridges, but has lost the hind-talon; the second molars are somewhat damaged anteriorly.
Collected by Mr. Theobald.
- A. 138. Second right upper true molar; from the Punjab. This tooth agrees with No. A. 82, except in the development of

the hind-talon into a fifth ridge. Figured in the 'Pal. Ind.' *op. cit.* pl. xxxviii., fig. 1. *Collected by Mr. Theobald.*

- A. 88. Much-worn fragment of an intermediate (P 2nd) molar, showing part of three ridges; from Gadari, Punjab.

Collected by Mr. Theobald.

- A. 89. Fragment of an upper molar with three ridges and a hind-talon remaining; from Gadari. *Collected by Mr. Theobald.*

- A. 90. The later ridges of the second left upper true molar belonging to the same individual as the third molar No. A. 86.

Collected by Mr. Wynne.

- A. 93. Cast of part of right maxilla with portions of two molars. The original, which is figured in the F. A. S.' pl. xxxi., fig. 1, is from the Siwalik Hills, and is in the British Museum.

A. S. B. Collection.

- A. 86. Fragment of the right maxilla containing part of the second and the complete third true molar; from Lehri, Punjab. *Fig.* The third molar is figured in the 'Pal. Ind.' *op. cit.* pl. xxxix: the artist has represented it as viewed from the outer instead of the inner side (as stated in the description of the plate), and it should therefore be reversed in order to make it correspond with the other figures in the same volume.

Collected by Mr. Wynne.

- A. 78. The anterior and posterior ridges of the third left upper true molar belonging to the same individual as No. A. 86.

Collected by Mr. Wynne.

- A. 81. The third left upper true molar, with five ridges and a double hind-talon, in an early condition of wear; from Lehri.

Collected by Mr. Wynne.

- A. 144. Third left upper true molar; from Burma. There are five ridges and a double hind-talon, the first part of which might be reckoned as a sixth ridge: the first ridge is somewhat damaged.

No history.

- A. 76. Fragment of large (P 3rd) upper true molar, slightly worn; from Sehwan, Sind.

A. S. B. Collection (No. Sc. 1).

- A. 91. The last ridge of a third (?) true molar; from Sind.

Collected by Mr. Fedden.

- A. 66. Third right lower milk-molar; from the Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxxvii., fig. 2.

Collected by Mr. Theobald.

- A. 77. Fourth right lower milk-molar, or first true molar; probably *Fig.* from Burma. Figured in the 'Pal. Ind.' *op. cit.* pl. xxxvii., fig. 1. *A. S. B. Collection (No. P. 13).*
- A. 79. Part of fourth left lower milk-molar (or $\overline{m.1}$), showing the hind-talon and two ridges; from Sind. *A. S. B. Collection (No. Sc. 2).*
- A. 74. Second left lower true molar; from Jabi, Punjab. This tooth is much worn and shows four ridges and a large hind-talon. *Collected by Mr. Theobald.*
- A. 97. Left ramus of the mandible, with $\overline{m.2}$ and first four ridges of $\overline{m.3}$; from Niki. The second molar has four ridges and a hind-talon. *Collected by Mr. Theobald.*
- A. 92. A much-worn intermediate lower molar; from the Punjab. *Collected by Mr. Theobald.*
- A. 80. Part of an intermediate lower molar; from Burma. *No history.*
- A. 95. Third right lower true molar in a fragment of the mandible; from Niki, Punjab. This specimen carries five ridges and a hind-talon; the anterior ridges are much worn and broken. In front of the tooth there is a small tooth-like knob, apparently the remnant of an abnormally placed fang of the preceding tooth. *Collected by Mr. Theobald.*
- A. 75. The inner half of the third left lower true molar; from the Potwâr district, Punjab. There are four ridges and a talon remaining, the first ridge having been broken away. *Collected by Mr. Theobald.*
- A. 94. Part of the third right lower true molar; from Niki. This tooth has five ridges, and is remarkable for its narrowness. *Collected by Mr. Theobald.*
- A. 30. Part of the third right lower true molar; from Jabi. The tooth is much worn, and shows the last three ridges and the hind-talon. *Collected by Mr. Theobald.*
- A. 136. Greater part of the third left lower true molar; from Burma. There are five ridges and a small talon. *No history.*
- A. 148. Fragment of the left ramus of the mandible, containing the hinder half of the third true molar; probably from Burma. It shows four ridges and a hind-talon, the first three remaining ridges being well worn. There are large accessory

tubercles at the inner extremities of the valleys; the worn dentine surfaces present the characteristic transverse elongation.

A. S. B. Collection (No. A. 4).

- A. 72.** The third right upper premolar, provisionally referred to this species; from Asnot, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxxvii., fig. 7.

Collected by Mr. Theobald.

- A. 70.** A tooth agreeing with the last; from Sind.

Collected by Mr. Fedden.

- A. 71.** A fourth right upper premolar, agreeing with No. A. 64; from Asnot.

Collected by Mr. Theobald.

- A. 73.** A similar tooth to the last; from Asnot.

Collected by Mr. Theobald.

Mastodon perimensis, Falc. and Caut.

"Fauna Antiqua Sivalensis," pt. 4, pl. xxxi. (1847).

- A. 101.** Cast of cranium. The original is from Perim Island, and is now in the British Museum; it is figured in the 'F. A. S.' pls. xxxviii., xxxix.

A. S. B. Collection.

- A. 16.** A second right upper milk-molar, provisionally referred to the present species; from the Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xli., fig. 3.

Collected by Mr. Theobald.

- A. 67.** Cast of third left upper milk-molar. The original is from Perim Island, and is preserved in the British Museum (No. 40778); it is figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. xvii., fig. 3.

A. S. B. Collection.

- A. 48.** Fragment of the left maxilla containing pm. 4. and m. 1.; Fig. from the Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xl.

Collected by Mr. Theobald.

- A. 49.** Fragment of a tooth with two ridges remaining, which may be m. 1.; from the Punjab.

Collected by Mr. Theobald.

- A. 355.** The second right lower (?) true molar; from Perim Island. Fig. This specimen is to be figured in the introduction to the third volume of ser. 10 of the 'Pal. Ind.' *No history.*

- A. 437.** The second right upper true molar, wanting the hind ridge and talon; from Perim Island. Figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. xvi., fig. 2.

Collected by Mr. Fedden, 1883.

- A. 53. The second right upper true molar, partially worn and somewhat broken; from Perim Island. Figured in 'Pal. Mem.' vol. i., pl. ix., figs. 5, 6. *A. S. B. Collection (No. P. 2).*
- A. 46. The complete third left upper true molar; from the Punjab. Fig. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xlii. *Collected by Mr. Theobald.*
- A. 51. Hinder part of third right upper true molar, with three ridges and talon remaining; from Perim Island. This specimen is smaller than No. A. 46. *A. S. B. Collection.*
- A. 61. The first three ridges of third right upper true molar; from near Bhimbar (N. W. of Jamu). *Collected by Mr. Theobald.*
- A. 62. The first four ridges of third left upper true molar, agreeing exactly with No. A. 46; from near Jamu. *Collected by Mr. Theobald.*
- A. 54. The second left lower true molar; from the Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xli., fig. i. *Collected by Mr. Theobald.*
- A. 45. The third right lower true molar; from near Niki, Punjab. This tooth has five ridges and a talon; the valleys have accessory tubercles and the worn first ridge exhibits the characteristic trefoil. *Collected by Mr. Theobald.*
- A. 47. The third left lower true molar; from the Potwár district, Punjab. *Collected by Mr. Theobald.*
- A. 58. Cast of fragment of right ramus of mandible with $\overline{m. 3}$. The original is from Perim Island, and is figured in the 'F. A. S.' pl. xxxi., fig. 11. The tooth agrees very closely with No. A. 47. *A. S. B. Collection.*
- A. 84. The complete mandible, showing part of $\overline{m. 2}$ and the perfect $\overline{m. 3}$ of either side; from the Punjab. This specimen is noticed in the 'Pal. Ind.' ser. 10, vol. i., p. 245; there are no tusks. *Collected by Mr. Theobald.*
- A. 85. The third left lower true molar, somewhat damaged, but agreeing precisely with $\overline{m. 3}$ of No. A. 84; from near Niki. *Collected by Mr. Theobald.*
- A. 59. Part of the symphysis of the mandible, showing sections of a pair of small tusks; from near Niki. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xliii., fig. 2. *Collected by Mr. Theobald.*

- A. 60. The extremity of a similar mandible, also exhibiting sections of tusks; from near Niki. *Collected by Mr. Theobald.*
- A. 83. The symphysis of a mandible without tusks; from near Jabl, Punjab. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xliii., fig. 1. *Collected by Mr. Theobald.*
- A. 96. Fragment of right ramus of mandible, showing part of third (?) true molar; probably from Perim Island. *A. S. B. Collection (No. P. 102).*
- A. 56. Fragment of a molar with three ridges remaining, referred by Falconer to this species; from Perim Island. *A. S. B. Collection (No. P. 3).*
- A. 413. A molar; from Perim Island. *Captain Searle's Collection.*

*B. Trilophodont group.***Mastodon pandionis, Falc.**

'Pal. Mem.' vol. i., p. 124, pl. xxxiv (1868).

- A. 31. Portion of tooth regarded as m.m. 4; from Sind. *Collected by Mr. Fedden*
- A. 347. Cast of first left upper true molar. The original is probably from Sind, and is in the British Museum (No. 40818): it is the type, and is figured in the 'Pal. Ind.' ser. 10., vol. iii., pl. v., fig. 5. *Purchased.*
- A. 33. A very much worn first left upper true molar; from Asnot, Punjab. This specimen is figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. xxxii., fig. 4 (under the name of *M. falconeri*, but is referred to the present species in vol. iii., p. 34). The form of the crown is slightly different from that of the last specimen. *Collected by Mr. Theobald.*
- A. 436. Cast of first right upper true molar. The original is from Perim Island, and is figured in the 'Pal. Ind.' *op. cit.* vol. iii., pl. xvii., fig. 2. The shape of the crown agrees with that of the last specimen. *Made from the original, 1884.*
- A. 350. The palate, showing m. 2 and m. 3 of both sides; from the Punjab. The left dentition of this splendid specimen is figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. xxxva. *Collected by Mr. Theobald, 1880.*
- A. 41. The third left upper true molar; from the Punjab. *Collected by Mr. Theobald.*

- A. 63. The third right upper true molar; from the Punjab: from Asnot, Punjab.
- A. 42. Fragment of a tooth which may be the second left upper true molar; from Sind. *Collected by Mr. Fedden.*
- A. 424. The first left lower true molar; from Dera Búgti. Figured in the 'Pal. Ind.' *op. cit.* vol. iii., pl. v., fig. 1. *Collected by Mr. Blanford, 1882.*
- A. 37. A first lower true molar, partly broken; from Asnot. Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. xxxv., fig. 1. It is there described as belonging to the right side, but this may be erroneous. *Collected by Mr. Theobald.*
- A. 43. A first lower true molar, with one ridge broken; from Perim Island. *No history.*
- A. 39. The second left lower true molar; from Niki, Punjab. The tooth has three ridges and fore-and-aft talons.
- A. 98. Symphysis and part of the right ramus of the mandible; from Asnot. The last true molar is *in situ* and is figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. xxxv., fig. 4; the symphysis (which is tuskless) being figured in pl. xxxvi., fig. 1. *Collected by Mr. Theobald.*
- A. 99. The distal portion of a tusked symphysis; from Niki. Figured in the 'Pal. Ind.' *op. cit.* pl. xxxvi., fig. 2. *Collected by Mr. Theobald.*
- A. 100. The greater portion of the mandible, containing $\overline{m. 2}$ and $\overline{m. 3}$ of either side; from the Punjab. The teeth of the right side are figured in the 'Pal. Ind.' *op. cit.* pl. xxxiv.; they differ somewhat from $\overline{m. 3}$ of No. A. 98, but agree precisely in shape with $\overline{m. 1.}$, No. A. 424; No. A. 37 agreeing in shape with No. A. 98. These differences are analogous with those prevailing between the first upper molars, Nos. A. 436 and A. 436, and indicate a broad and a narrow-toothed variety of the species. *Collected by Mr. Theobald.*
- A. 27. A last lower true molar; from the Punjab. This tooth agrees with $\overline{m. 3}$ of No. A. 100. *Collected by Mr. Theobald.*
- A. 407. Imperfect molars; from Sind. *Collected by Messrs. Blanford and Fedden.*
- A. 408. Imperfect molars; from the Punjab. *Collected by Mr. Theobald.*

- A. 354. Cast of extremity of the right ramus of the mandible of a young individual provisionally referred to this species. The original is said to be from the Siwalik Hills (? Sind), and is in the British Museum. It is noticed in the 'Pal. Ind.' ser. 10, vol. ii., p. 65: the first tooth of which the alveolus remains is probably m.m. 2, and not m.m. 1., as there suggested. *Purchased.*

The reference of the following specimens is provisional.

- A. 50. A small tooth figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. xxxv., *Fig.* fig. 3, as the third left upper milk-molar: if this be correct the specimens Nos. A. 26, 34, 35 (pp 103-4), cannot belong to this species; from the Punjab. *Collected by Mr. Theobald.*
- A. 68. A small tooth figured in the 'Pal. Ind.' *op. cit.* pl. xxxvii., fig. *Fig.* 3, as the third left lower milk-molar; from Sind. *Collected by Mr. Blanford.*
- A. 322. A small tooth figured in the 'Pal. Ind.' *op. cit.* pl. xxxv., fig 2, *Fig.* as the fourth left lower premolar; from Sind. *Collected by Mr. Blanford.*
- A. 69. A tooth corresponding with No. A. 322; from Sind. *Collected by Mr. Fedden.*
- A. 432. The fourth right upper premolar; from Dera Búgti. Figured *Fig.* in the 'Pal. Ind.' *op. cit.* vol. iii., woodcut, p. 31. *Collected by Mr. Blanford, 1882.*
- A. 433. The homologous tooth; from Dera Búgti. Figured in the 'Pal. Ind.' *op. cit.* pl. v., fig. 6. *Collected by Mr. Blanford, 1882.*
- A. 434. Homologous tooth of left side; from Dera Búgti. *Collected by Mr. Blanford, 1882.*

Mastodon angustidens, Cuv.

'Ann. d. Muséum' vol. viii., p. 412 (1806). (*Mastodonte à dents étroites.*)

Var. palæindicus, Lyd.

'Pal. Ind.' ser. 10, vol. iii., p. 19 (1884).

- A. 427. Second left upper true molar; from Dera Búgti. Figured *Fig.* in the 'Pal. Ind.' ser. 10, vol. iii., pl. iv., fig. 1. *Collected by Mr. Blanford, 1882.*
- A. 425. Second left upper true molar; from Dera Búgti. Figured in *Fig.* the 'Pal. Ind.' *op. cit.* pl. iv., fig. 2. *Collected by Mr. Blanford, 1882.*

- A. 422. Fourth left lower milk-molar; from Dera Búgti. Figured in
Fig. the 'Pal Ind.' *op. cit.* pl. iv., fig. 5.
Collected by Mr. Blanford, 1882.
- A. 417. Part of first, right lower true molar; from Dera Búgti.
Fig. Figured in the 'Pal. Ind.' *op. cit.* pl. v., fig. 7.
Collected by Mr. Blanford, 1882.
- A. 421. Greater part of first left lower true molar; from Dera Búgti.
Fig. Figured in the 'Pal. Ind.' *op. cit.* pl. iv., fig. 8.
Collected by Mr. Blanford, 1882.
- A. 423. Second left lower true molar; from Gandoi, Búgti Hills.
Fig. Figured in the 'Pal. Ind.' *op. cit.* pl. iv., fig. 7.
Collected by Mr. Blanford, 1882.
- A. 426. Third right lower true molar, associated with No. A. 425.
Fig. Figured in the 'Pal. Ind.' *op. cit.* pl. iv., fig. 3.
Collected by Mr. Blanford, 1882.
- A. 435. Fragment of right ramus of mandible, with base of m. 3;
from Dera Búgti. *Collected by Mr. Blanford, 1882.*
- The reference of the following specimens is provisional.*
- A. 428. (?) Third right upper premolar; from Dera Búgti. Figured
Fig. in the 'Pal. Ind.' *op. cit.* pl. v., fig. 4.
Collected by Mr. Blanford, 1882.
- A. 429. (?) Fourth right upper premolar; from Dera Búgti. Figured
in the 'Pal. Ind.' *op. cit.* pl. v., fig. 2.
Collected by Mr. Blanford, 1882.
- A. 430. (?) Fourth left lower premolar; from Dera Búgti. Figured
Fig. in the 'Pal. Ind.' *op. cit.* pl. iv., fig. 6.
Collected by Mr. Blanford, 1882.
- A. 431. An unworn tooth corresponding to the last Figured in the 'Pal.
Ind.' *op. cit.* pl. iv., fig. 4. *Collected by Mr. Blanford, 1882.*

Mastodon falconeri, Lyd.

'Rec. Geol. Surv. Ind.,' vol. x., p. 83 (1877).

- A. 38. The second left upper true molar; from Asnot, Punjab.
Fig. This tooth is figured in the 'Pal. Ind.' ser. 10, vol. i., pl.
xxxii., fig. 1. *Collected by Mr. Theobald.*
- A. 327. The two terminal ridges of the second upper true molar,
agreeing exactly with No. A. 38; from the Deraját.
Dr. Verchère's Collection.

- A. 32. First right upper true molar; from Sind. Figured in the Fig. 'Pal. Ind.' *op. cit.* pl. xxxii., fig. 3 (as m. 1., but referred in vol. iii., p. 22 to m. 1.) Collected by Mr. Theobald.
- A. 29. Part of right ramus of the mandible with m. 2.; from the Potwár district, Punjab. Figured in the 'Pal. Ind.' *op. cit.* vol. i., pl. xxxiii., figs. 1, 4. This specimen is the type. Collected by Mr. Theobald.
- A. 28. The second lower molar of smaller size than the last, but perhaps belonging to the same species; said to be from Burma. No history.
- A. 52. The last two ridges of the second right lower true molar; from Asnot. This specimen corresponds very closely with No. A. 29, but has a smaller hind-talon. Collected by Mr. Theobald.
- A. 44. Part of left ramus of the mandible of a specifically undetermined trilophodont *Mastodon*: from the Potwár. The specimen shows m. 3., which contains three ridges and fore-and-aft talons; it may belong to the present species. Collected by Mr. Theobald.
- A. 40. The fourth right lower milk-molar of a trilophodont *Mastodon* which it has been thought may belong to the present species; from the Potwár. Collected by Mr. Theobald.

Mastodon, sp.

The following specimens were referred in ser. 10, vol. i., of the 'Pal. Ind.' to *M. falconeri*, but in vol. iii., pp. 32, 33, reasons are given for doubting this identification. It is possible that they belong to *M. pandionis*,¹ but there are no signs of their being succeeded by premolars: they closely resemble the corresponding teeth of *M. panteleci*.

- A. 26. The imperfect cranium of a young individual, containing Fig. m.m. 4 and m. 1 of both sides; from Niki, Punjab. The left m.m. 4 is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxxii., fig. 3. Collected by Mr. Theobald.
- A. 34. The third upper milk-molars of both sides, associated with Fig. No. A. 26. The left tooth is figured in the 'Pal. Ind.' *op. cit.* pl. xxxii., fig. 2. Collected by Mr. Theobald.

¹ Vide 'Pal. Ind.' ser. 10, vol. iii., p. 154. The circumstance that these teeth have corrugated enamel while the true molars of *M. falconeri* have smooth enamel does not of itself indicate specific distinction, as a similar difference occurs between the milk and permanent molars of *M. arvernensis* (F. A. S. pl. xxxvi., figs. 6 and 9), and *M. sivalensis*.

- A. 35. A germ corresponding with the preceding specimen; from the Potwár district, Punjab. *Collected by Mr. Theobald.*
- A. 36. The third right lower milk-molar, associated with No. A. 26. *Fig.* Figured in the 'Pal. Ind.' *op. cit.* pl. xxxiii., fig. 2. *Collected by Mr. Theobald.*

Family DINOTHERIIDÆ.

Genus DINOTHERIUM, Kaup.

'Isis,' vol. xxii., p. 401 (1829).

Dinotherium indicum,¹ Falc.

'Quart. Journ. Geol. Soc.,' vol. i., p. 361 (1845).

- A. 323. Hinder ridge of second left upper true molar; from the *Fig.* Deraját. Figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxxi., fig. 1 (as of the right side). *Dr. Verchère's Collection.*
- A. 321. First left lower true molar; from Sind. Figured in the 'Pal. Ind.' *op. cit.* pl. xxxi., fig. 2. *Collected by Mr. Blanford.*
- A. 24. Cast of part of left ramus of the mandible. The original is from Perim Island, and is now in the British Museum; figured in the 'F. A. S.' pl. xxxv., fig. 6. *A. S. B. Collection.*
- A. 25. Cast of a cervical vertebra. The original is from Perim Island and is now in British Museum. *A. S. B. Collection.*

Dinotherium pentapotamiæ, Lyd. (*ex* Falc. MS.)

'Pal. Ind.' ser. 10, vol. i., p. 72 (1876).

Syn. *Antoletherium*, Falc.

- A. 1. Third right upper premolar; from Khushálgarh, Punjab. This *Fig.* (with No. A. 2) is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. ix., fig. 1. *Presented by Lieuts. Garnett and Trotter.*
- A. 6. Third left upper premolar, rather smaller than the last; from Sind. *Collected by Mr. Fedden.*
- A. 7. Anterior half of fourth left upper premolar; from Sind. *Collected by Mr. Fedden.*

¹ This and the two next species have been identified by Weinsheimer with *D. giganteum*, Kaup (*vide* Pal. Ind. ser. 10, vol. III., p. 34). It is not impossible that *D. indicum* and *D. pentapotamiæ* may belong to one species.

- A. 12.** Fourth left upper premolar ; from Sind. Figured in the 'Pal. Ind.' *op. cit.* pl. xxxi., fig. 3. *Collected by Mr. Blanford.*
- A. 324.** Hinder half of fourth left upper premolar ; from the Deraját.
Dr. Verchère's Collection.
- A. 2.** First right upper true molar, associated with No. A. 1. Figured
Fig. in the 'Pal. Ind.' *op. cit.* pl. ix., fig. 2.
Presented by Lieuts. Garnett and Trotter.
- A. 3.** Part of first right upper true molar ; from Kach. Figured
Fig. in the 'Pal. Ind.' *op. cit.* pl. ix., fig. 4.
Collected by Mr. Fedden.
- A. 4.** Fragment of first left upper true molar ; from Kach.
Collected by Mr. Fedden.
- A. 5.** First ridge of first left upper true molar ; from Sind.
Collected by Mr. Fedden.
- A. 11.** Fragment of first left upper true molar ; from Sind.
Collected by Mr. Blanford.
- A. 19.** Last ridge of first left upper true molar ; from Sind.
Collected by Mr. Fedden.
- A. 10.** Second right upper true molar ; from Kach. Figured in the
Fig. 'Pal. Ind.' *op. cit.* pl. ix., fig. 3.
- A. 351.** The second left upper true molar ; from Kumliál Kúr, Punjab ; from a bed very low in the series.
Collected by Mr. Wynne.
- A. 352.** Part of the third left upper true molar, associated with the last.
- A. 20.** Fragment of the right ramus of the mandible, containing
Fig. $\overline{pm. 4}$, $\overline{m. 1}$, and $\overline{m. 2}$; from Kushálgarh. Figured in 'Falconer's Palæontological Memoirs,' vol. i., pl. xxxiv., figs. 1 and 2 (as *Antoletherium*), and in the 'Pal. Ind.' *op. cit.* pl. xxix., figs. 2, 3.
Presented by Lieuts. Garnett and Trotter.
- A. 21.** Fragment of left ramus of mandible with $\overline{m. 2}$ and $\overline{m. 3}$;
Fig. locality unknown. Figured in the 'Pal. Ind.' *op. cit.* pl. xxix., fig. 1. *A. S. B. Collection.*
- A. 22.** Part of left ramus of mandible with all the cheek-teeth except
Fig. $\overline{pm. 1}$; from Sind. Figured in the 'Pal. Ind.' *op. cit.* pl. xxx.
Collected by Mr. Blanford.

- A. 18. One ridge of fourth right lower premolar; from Sind.
Collected by Mr. Fedden.
- A. 13, 9, 15. Three specimens of the hinder half of the last lower true molar; from Sind.
Collected by Mr. Fedden.
- A. 14. Last ridge and talon of the third left lower true molar; from Sind. Figured in the 'Pal. Ind.' *op. cit.* pl. ix., fig. 5 (as $\overline{m. 1}$, but referred on page 192 to $\overline{m. 3}$).
Collected by Mr. Fedden.
- A. 325. Half of a third lower molar, cut and polished; from the Deraját.
Dr. Verchère's Collection.
- A. 326. The third left lower molar; from the Siwalik Hills.
By exchange with the Rürki Museum.
- A. 335. The third right lower true molar; from the Deraját.
By exchange with the Lahore Museum.
- A. 336. The second right lower true molar, probably belonging to the same individual as the last; from the Deraját.
By exchange with the Lahore Museum.
- The reference of the following specimens is provisional.*
- A. 8. The third right upper milk-molar, bearing two ridges; from Khushálgarh.
Collected by Mr. Theobald.
- A. 17. The third upper milk-molar; from Sind.
Collected by Mr. Fedden.
- A. 337. The third right upper milk-molar; from the Deraját.
By exchange with the Lahore Museum.

Dinotherium sindiense, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 196 (1880).

- A. 23. Fragment of the right ramus of the mandible, with $\overline{m. 2}$ and $\overline{m. 3}$ (broken); from Sind. This specimen is the type, and is figured in the 'Pal. Ind.' ser. 10, vol. i., pl. xxxi., fig. 4.
Collected by Mr. Fedden.
- A. 409. Part of one ramus of the mandible, with the crowns of the molars broken off; from the Kohát district. Noticed in the 'Pal. Ind.' *op. cit.* p. 292.
Collected by Mr. Wynne, 1880.

GENERALLY UNDETERMINED REMAINS.¹

- A. 416. Lower (?) molar of a trilophodont *Mastodon*; from Dera Búgti.
Collected by Mr. Blanford, 1882.
- A. 418. Much-worn upper molar of a trilophodont *Mastodon* or *Dinotherium*; from Dera Búgti.
Collected by Mr. Blanford, 1882.
- A. 419. A lower molar in a fragment of mandible; from Dera Búgti.
Collected by Mr. Blanford, 1882.
- A. 420. Fragment of molar; from Dera Búgti.
Collected by Mr. Blanford, 1882.
- A. 293. Tusk in fragments; from the Siwalik Hills. *No history.*
- A. 300. Tip of tusk.
- A. 301. Fragment of young tusk; from the Siwalik Hills.
A. S. B. Collection.
- A. 302. Fragment of tusk; from the Siwalik Hills.
A. S. B. Collection.
- A. 303. Two extremities of tusks.
- A. 308. Part of a tusk in two pieces.
- A. 318. Tip of tusk; from Burma. *No history.*
- A. 319. Tips of two young tusks.
- A. 381. Part of scapula.
- A. 384. The two extremities of a humerus.
- A. 385. Proximal half of a humerus.
- A. 386. Two specimens of the head of the humerus.
- A. 382. Distal extremity of a humerus.
- A. 383. Ditto ditto.
- A. 400. A carpal bone.
- A. 328. Left lunar.
- A. 329. A smaller left lunar.
- A. 330. Right lunar.
- A. 331. Right cuneiform (*carpi*).
- A. 332. Broken left cuneiform.
- A. 360. Two specimens of the median metacarpal.
- A. 361. A median metacarpal.
- A. 362. A metacarpal.
- A. 370. Two phalangeals.
- A. 371. Ditto ditto.
- A. 372. A phalangeal.
- A. 373. Two phalangeals.
- A. 374. Ditto ditto.

¹ Except when otherwise stated, the following specimens are from the Punjab, and were collected by Mr. Theobald.

- A. 375. A phalangeal.
 A. 376. A phalangeal; from the Siwalik Hills. *A. S. B. Collection.*
 A. 390. Two specimens of the head of the femur.
 A. 387. Two specimens of the distal end of the femur.
 A. 388. Ditto ditto.
 A. 389. The distal end of a femur.
 A. 378. Two specimens of the patella.
 A. 379. Ditto ditto.
 A. 380. A patella.
 A. 377. A small tibia, probably belonging to the same individual as the young *Mastodon* cranium No. A. 26 (page 103); from Niki.
 A. 391. Two specimens of the proximal end of the tibia.
 A. 392. The proximal end of a tibia; from the Markanda valley.
Presented by Col. Godwin-Austen, 1866.
 A. 411. Part of tibia; from Perim Island. *Captain Searle's Collection.*
 A. 412. A fibula; from Perim Island. *Captain Searle's Collection.*
 A. 356. Two specimens of the astragalus.
 A. 357. Ditto ditto.
 A. 358. An astragalus; from Sind. *Collected by Mr. Fedden.*
 A. 367. An astragalus.
 A. 359. Two specimens of the calcaneum.
 A. 368. The calcaneum of a calf, associated with No. A. 367.
 A. 363. Two metatarsals.
 A. 364. A metatarsal.
 A. 365. A metatarsal; from Sind. *Collected by Mr. Fedden.*
 A. 366. Two metatarsals.
 A. 369. A metatarsal.
 A. 393. An atlas vertebra.
 A. 394. An atlas vertebra; from Perim Island. *No history.*
 A. 395. A cervical vertebra.
 A. 396. Ditto.
 A. 397. Ditto.
 A. 410. Ditto ; from Perim Island.
Captain Searle's Collection.
 A. 398. Neural spine of a dorsal vertebra.
 A. 399. A dorsal vertebra.
 A. 404. Various bones; from Burma. *Collected by Mr. Blanford.*
 A. 405. Ditto ; from Sind.
Collected by Messrs. Blanford and Fedden.
 A. 406. Ditto.

Order EDENTATA.

Suborder *SQUAMATA*.

Family MANIDÆ.

Genus **MANIS**, Linn.

"Syst. Nat.," ed. 12, vol. i., p. 52 (1766).

Manis sindiensis, Lyd.

'Pal. Ind.' ser. 10, vol. i., p. 82 (1876).

- D. 99.** The second phalangeal of the third digit of the manus; from
Fig. Sind. Figured in the 'Pal. Ind.' *op. cit.* pl. viii., figs.
 11-14. *Collected by Mr. Fedden, 1875.*

UNDETERMINED.

The following specimens are figured in the 'Pal. Ind.' ser. 10, vol. iii., pl. xiv., pp. 2, 4, 5, 6, as belonging to a struthiod bird; but have been subsequently found to be mammalian. (*Vide* 'Geol. Mag.' Dec. iii., vol. ii., p. 237 (1885). They were all collected by Mr. Theobald in the Punjab:—

- E. 1.** A first phalangeal. Figured, *op. cit.* fig. 2.
Fig.
E. 2. A first phalangeal. Figured, *op. cit.* fig. 6.
Fig.
E. 3. A second phalangeal. Figured, *op. cit.* fig. 4.
Fig.
E. 4. A second phalangeal. Figured, *op. cit.* fig. 5.
Fig.



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33	99	84	98	135	92	186	81
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